

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
CHARLES D. WALCOTT, DIRECTOR

RESULTS

OF

SPIRIT LEVELING IN THE STATE OF NEW YORK

FOR THE

YEARS 1896 TO 1905
INCLUSIVE

BY

S. S. GANNETT AND D. H. BALDWIN



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RESULTS OF SPIRIT LEVELING IN THE STATE OF NEW YORK FOR THE YEARS 1896 TO 1905, INCLUSIVE.

By S. S. GANNETT and D. H. BALDWIN.

INTRODUCTION.

The readjustment in 1903 of the precise-level net in the eastern portion of the United States by the United States Coast and Geodetic Survey necessitated a corresponding readjustment of all spirit-level heights of the United States Geological Survey dependent thereon. These results will be summarized by States or groups of States and published from time to time in bulletin form.

All results of leveling in New York State previously published in appendices to reports of the Director of the United States Geological Survey and in Bulletin No. 185, as well as levels not previously published, have therefore been readjusted, rearranged by quadrangles, and collected herewith in one publication. Descriptions and elevations of bench marks are given in nearly every county, furnishing vertical control for fully eight-tenths of the total area of the State.

The field work was done in cooperation with the State of New York, under the direction of Mr. H. M. Wilson, geographer, United States Geological Survey, by various topographers and levelmen of the United States Geological Survey, to whom due credit is given under the different headings listed in the following pages.

The office work of adjustment was principally done by Mr. D. H. Baldwin, topographer, assisted by C. B. Kendall, field assistant, under the supervision of Mr. S. S. Gannett, geographer in charge of the triangulation and computing section.

The elevations are arranged according to the degree of accuracy of their determination, precise and primary, the former being determined by lines of levels run either in both the forward and backward directions or by simultaneous double-rodDED lines, using a high-grade instrument and taking special precautions in observations and reductions to correct errors and make the line continuously good throughout; and the latter or primary levels being determined with the Y level with precautions taken against the principal errors and run mostly in circuits of single lines.

The allowable limit of error observed on the precise work already done by the Geological Survey in this State is represented in feet by $0.03 \sqrt{D}$, and that for the primary work by $0.05 \sqrt{D}$, in which D is the length of circuit in miles.

The bench marks described in the following lists are of three general forms. First, a circular bronze or aluminum tablet $3\frac{1}{2}$ inches in diameter and one-fourth inch thick, appropriately lettered, having a 3-inch stem cemented into a drill hole, generally in the vertical walls of public buildings, bridge abutments, or other substantial masonry structures. The second form, employed where masonry or rock is not accessible, consists of a hollow wrought-iron post 4 feet in length and $3\frac{1}{2}$ inches in outer diameter, split at the bottom and expanded to 12 inches, so as to prevent both the easy subsidence of the post and its being maliciously pulled out of the ground. The iron is heavily coated with asphalt, and over the top of the post is riveted a bronze tablet similar to that described above.

The third form (used in 1896 and 1897) was a copper bolt 4 inches long and 1 inch in diameter fastened into masonry or solid rock by driving it on a brass wedge placed in the bottom of a vertical hole, so that the top of the bolt was horizontal and thus formed the bench mark.

The numbers stamped upon the bench marks as described in the following lists represent the elevations to the nearest foot above mean sea level, as determined by unadjusted levels in the field. In some cases the finally accepted elevations as printed herein differ from those submitted as bench-mark numbers by several feet, resulting from the adjustments necessary to close circuits and to those resulting from reduction to mean sea level through readjustment of the precise-level net of the United States. This method of numbering bench marks has been adopted where many levelers are working in the same area at the same time, as less liable to lead to confusion in identification of bench marks than any attempt at serial numbering, and because the bench-mark number at the same time gives an approximate statement of elevation. It is assumed that engineers and others finding these bench marks so stamped in the field will communicate with the Director of the United States Geological Survey or the State engineer of New York in order to obtain the accepted elevation to hundredths or thousandths of a foot.

Any person finding bench marks in the following lists mutilated or destroyed will confer a favor by notifying the Director, United States Geological Survey, Washington, D. C.

PRECISE LEVELING.

FRANKLIN COUNTY.

DICKINSON, HOGANSBURG, KILDARE, LONG LAKE, MEACHAM LAKE, AND ST. REGIS QUADRANGLES.

The elevations published in the following list are the result of a line of precise leveling run north from Tupper Lake to a connection with a primary bench mark of the Deep Waterways Commission at Fort Covington, Franklin County, a 2-inch square cut on east abutment of the Grand Trunk Railway bridge over Salmon River 1 foot from the south and east edges. The elevation of this is accepted as 166.452 feet above mean sea level, as derived by the United States Coast and Geodetic Survey adjustment in 1903 of the precise level net. The elevations are corrected in agreement with this, but no error has been distributed in this line.

The double-simultaneous method was employed with a Buff & Berger precise level. The leveling was executed by Mr. C. H. Semper, levelman in charge. All standard bench marks are referred to the Albany datum and are stamped with the letters "ALBANY" in addition to the figures of elevation and year.

TUPPER LAKE JUNCTION, VIA MOIRA AND BOMBAY, TO FORT COVINGTON.

LONG LAKE QUADRANGLE.

	Feet.
Tupper Lake Junction, New York Central Railroad, Adirondack division, in foundation to water tank; aluminum tablet stamped "1555 ALBANY"	1,556.031

KILDARE QUADRANGLE.

Kildare, 350 feet north of station, in large boulder 8 feet east of rail; bronze tablet stamped "1528 ALBANY 1900"	1,527.874
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ST. REGIS QUADRANGLE.

Blue Pond, in front of station; top of rail	1,552.7
Blue Pond, 5 miles north of, 1,300 feet north of mile post "T. 18 & O. 110," in large boulder 10 feet west of track; bronze tablet stamped "1551 ALBANY 1900"	1,551.259
Brandon, in front of station; top of rail	1,603.4
Brandon, 1 mile north of, 0.4 mile north of milepost "T. 23 & O. 105," in large boulder 10 feet west of track; bronze tablet stamped "1595 ALBANY 1900"	1,594.129

MEACHAM LAKE QUADRANGLE.

	Feet.
Leboeuf, 0.3 mile north of, in large rock 125 feet north of section post 14-15, and 50 feet east of railroad; bronze tablet stamped "1556 ALBANY 1900".....	1,555.690
Spring Cove, in front of station; top of rail.....	1,342.6
Santa Clara, in front of station; top of rail.....	1,337.4
Santa Clara, 0.7 mile north of, 750 feet north of milepost "T. 37 & O. 91," in large rock 10 feet east of railroad; bronze tablet stamped "1306 ALBANY 1900".....	1,306.086

DICKINSON QUADRANGLE.

St. Regis Falls, 1,000 feet south of station, in large rock 20 feet west of railroad and 300 feet north of railroad water tank; aluminum tablet stamped "1256 ALBANY 1900".....	1,256.497
Dickinson Center, in front of station; top of rail.....	954.5
Dickinson Center, 3.6 miles north of, in large rock on east side of railroad at culvert No. 18, 25 feet east of rail, 5 feet north of track; aluminum tablet stamped "603 ALBANY 1900".....	602.642

HOGANSBURG QUADRANGLE.

Moirs, Methodist Episcopal Church, in east face of; aluminum tablet stamped "420 ALBANY 1900".....	419.450
Bombay, public school on Main street, in northwest face of; bronze tablet stamped "193 ALBANY 1900".....	193.144
Fort Covington (Deep Waterways primary bench mark), Grand Trunk Railway bridge over Salmon River; chiseled square, 1 foot from south edge and 1 foot from east edge of east abutment.....	166.453
Fort Covington, Grand Trunk Railway bridge over Salmon River, 600 feet west of station, top of south end of east abutment; bronze tablet stamped "167 ALBANY 1900".....	166.452

ALBANY, SARATOGA, AND WARREN COUNTIES.

LUZERNE, NORTH CREEK, SARATOGA, AND SCHENECTADY QUADRANGLES.

The elevations published in the following list are the result of a line of precise levels run from United States engineers' bench mark in Schenectady to a bench mark at North Creek, upon which certain primary leveling republished in this bulletin was formerly based.

These descriptions are republished from the Appendix to the Twenty-first Annual Report of the Geological Survey, Part I, but 0.427 foot has been added to the elevations there listed in accordance with the 1903 adjustment of the precise-level net.

The double-simultaneous method was employed with a Buff & Berger precise level. The leveling was done by Mr. E. L. McNair. The standard bench marks set in the course of this work are stamped with the letters "ALBANY 1899," in addition to the figures of elevation.

SCHENECTADY, VIA THE DELAWARE AND HUDSON RAILROAD, TO
NORTH CREEK.

SCHENECTADY QUADRANGLE.

	Feet.
Schenectady, New York Central and Hudson River Railroad bridge over Erie Canal, north-east corner of coping stone of abutment; bronze tablet stamped "242 ALBANY 1899" (set in August, 1899).....	241.195
Ballston Lake, 0.75 mile north of, coping stone at west end of stone culvert under railroad; aluminum tablet stamped "269 ALBANY 1899".....	269.116

SARATOGA QUADRANGLE.

Ballston Spa, Saratoga County court-house, foundation stone 4 feet left of main entrance; aluminum tablet stamped "320 ALBANY".....	320.848
Saratoga Springs, Loughberry Lake, surface of water.....	283
Saratoga Springs, Delaware and Hudson Railroad station, 1,500 feet south of, at east end of north abutment of steel-girder bridge over Congress street, in coping stone; aluminum tablet stamped "314 ALBANY 1899".....	314.410
Greenfield station, 0.33 mile north of, at southeast corner of stone culvert under railroad, in coping stone; aluminum tablet stamped "596 ALBANY 1899".....	596.343
Kings, 0.8 mile north of station, at northeast corner of stone culvert under railroad, in coping stone; aluminum tablet stamped "602 ALBANY 1899".....	602.834

LUZERNE QUADRANGLE.

	Feet.
Hadley, 1.5 miles south of, at northeast corner of stone culvert, about 600 feet west of red house on west side of highway, in coping stone; aluminum tablet stamped "634 ALBANY 1899".....	634.309
Hadley, 3.25 miles north of, at northwest corner of steel-girder Bridge No. 9 over Wolf Creek, in coping stone of bridge seat; aluminum tablet stamped "630 ALBANY 1899".....	630.458
Stony Creek, 0.4 mile south of, at northwest corner of steel-girder Bridge No. 10 over Stony Creek, in coping stone of bridge seat; aluminum tablet stamped "600 ALBANY 1899"....	600.427
Thurman, 1.25 miles north of station, at west end of south abutment of steel-girder Bridge No. 13, in coping stone; aluminum tablet stamped "628 ALBANY 1899".....	628.264

NORTH CREEK QUADRANGLE.

"The Glen," Delaware and Hudson Railroad station, 530 feet north of, at southwest corner of a steel-girder Bridge No. 14, 5 feet west of girder, in coping stone of bridge seat; aluminum tablet stamped "749 ALBANY 1899".....	749.510
Riverside, 230 feet north of station door, 65 feet west of center of main track, in large, flat rock outcrop 25 feet west of road; aluminum tablet stamped "883 ALBANY 1899".....	883.643
North Creek station, 0.4 mile southeast of, bridge seat at southeast corner of steel-girder Bridge No. 18, 4.4 feet below east rail; aluminum tablet stamped "1001 ALBANY 1899"....	1,001.491
North Creek station, 1,000 feet north of, in quarry outcrop on southwest side of track, 2 feet above track and 6 feet from southwest rail; bronze tablet stamped "1012" (set in 1896)....	1,008.048

JEFFERSON, LEWIS, AND ONEIDA COUNTIES.

ANTWERP, BOONVILLE, CARTHAGE, CLAYTON, LOWVILLE, PORT LEYDEN, REMSEN, THERESA, AND WATERTOWN QUADRANGLES.

The elevations published in the following list are based upon the Greenbush bench mark, the elevation accepted for which is 13.863 feet above mean sea level. The initial point upon which these levels depend is a bronze tablet set in the coping at the north end of retaining wall between lower mill dam and Rome, Watertown and Ogdensburg Railroad at Remsen, N. Y., stamped "1172;" the elevation of this bench mark is derived by a readjustment of primary circuits published in the Appendix to the Twentieth Annual Report of the Geological Survey, Part I, starting from a bench mark of the precise-level net at Utica, and its elevation is accepted as 1,171.464 feet above mean sea level.

A closure was made at Limerick on a temporary bench mark on the south parapet wall of stone-arch bridge over Perch River. This bench mark is on a primary circuit tied at Clayton to bench mark "A" of the precise line of the Deep Waterways Board, being a copper bolt in the water table at the southwest corner of the Catholic Church. The elevation of the latter, as corrected in the 1903 adjustment by the Coast and Geodetic Survey, is accepted as 278.815 feet above mean sea level.

The elevation of the Limerick bench mark, as determined by the primary circuit, is 317.06 feet and by the precise line 317.09 feet above mean sea level. The latter elevation is accepted for this bench mark, the closure 0.03 foot being well within the closure error of the primary circuit. The list, therefore, as here presented, is the unadjusted mean results of double-rodged simultaneous precise leveling. The instrument used was a Buff & Berger precise level with an 8-second vial. The leveling was done by Mr. C. H. Semper, levelman in charge, during the months of August and September, 1900. All standard bench marks dependent on this datum are stamped with the letters "ALBANY," in addition to figures of elevation and year. The elevations marked are mostly 1 foot low, an error caused in the field work by using an erroneous elevation published in the Appendix to the Twentieth Annual Report of the Geological Survey, Part I, page 354, for the Remsen bench mark, which is low by a clerical error of 1 foot, as noted in Bulletin No. 185.

REMSEN, ALONG THE ROME, WATERTOWN AND OGDENSBURG RAILROAD, TO LIMERICK.

REMSEN QUADRANGLE.

	Feet.
Remsen, between lower milldam and Rome, Watertown and Ogdensburg Railroad, north end of retaining wall, in end of coping, face near corner; bronze tablet stamped "1172".....	1,171.464
East Steuben, in front of station; top of rail.....	1,247.7
Steuben, at road crossing near station; top of rail.....	1,273.4
Alder Creek, milk station, 100 feet south of railroad station, west side of railroad, in south end (east face) of wall; bronze tablet stamped "1253 ALBANY 1900".....	1,254.385

BOONVILLE QUADRANGLE.

Boonville, canal Lock No. 71, at railroad station, top of west wall, south end; bronze tablet stamped "1120 ALBANY 1900".....	1,121.306
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PORT LEYDEN QUADRANGLE.

Leyden, in front of station; top of rail.....	1,007.4
Port Leyden, Hotel Brunswick, opposite station, front face in brickwork; bronze tablet stamped "897 ALBANY 1900".....	898.400
Lyons Falls, in front of station; top of rail.....	843.7
Glenfield, railroad station, front face of; bronze tablet stamped "776 ALBANY 1900".....	777.639
East Martinsburg, in front of station; top of rail.....	761.3

LOWVILLE QUADRANGLE.

Lowville station, 1,000 feet south of, railroad Bridge No. 756 over creek and highway, west side north abutment; bronze tablet stamped "863 ALBANY 1900".....	864.512
Lowville, in front of station; top of rail.....	868.8

CARTHAGE QUADRANGLE.

Castorland, 1,200 feet south of station, bridge over creek, top of north abutment, west side; bronze tablet stamped "736 ALBANY 1900".....	737.761
Castorland, in front of station; top of rail.....	746.2
Deer River, in front of station; top of rail.....	741.2
Carthage, Iron highway bridge over Black River, end of bridge rail 10 feet west of railroad, top of wing wall, east end; bronze tablet stamped "741 ALBANY 1900".....	742.143
Carthage, in front of station; top of rail.....	737.4

ANTWERP QUADRANGLE.

Great Bend, in front of station; top of rail.....	654.8
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THERESA QUADRANGLE.

Felts Mills, south abutment of Island Bridge over north channel of Black River, on east end of bridge seat; bronze tablet stamped "583 CAPE VINCENT".....	582.456
Black River, in front of station; top of rail.....	564.5

WATERTOWN QUADRANGLE.

Watertown, 2 miles west of, 100 feet north of railroad and 600 feet south of paper mill, stone culvert under railroad, top of masonry, north end; chiseled square.....	381.77
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CLAYTON QUADRANGLE.

Limerick, stone-arch bridge over Perch River; point on east end of south parapet wall.....	317.09
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ALBANY, ALLEGANY, BROOME, CATTARAUGUS, CHEMUNG,
OTSEGO, SCHENECTADY, SCHOHARIE, STEUBEN, AND TIOGA
COUNTIES.

AMSTERDAM, APALACHIN, BATH, BERNE, BELMONT, BINGHAMTON, CAMERON, CANASERAGA,
CHERRY CREEK, COHOES, COOPERSTOWN, CORNING, DELHI, DUNKIRK, ELMIRA,
GOWANDA, HORNELLVILLE, NINEVEH, OLEAN, ONEONTA, OWEGO, REDHOUSE, RICH-
MONDVILLE, SALAMANCA, SCHENECTADY, SCHOHARIE, SHONGO, SIDNEY, AND WAVERLY
QUADRANGLES.

The elevations in the following list are the result of a line of precise levels run between Dunkirk and Binghamton over the line of the Erie Railroad and between Binghamton and Cohoes over the line of the Delaware and Hudson Canal Company's Railway. Between Dunkirk and Elmira the line carried eastward was based on the top of the water table of Nelson Block, Dunkirk, and all bench marks in this portion of the line are stamped with the legend "D 1898" in addition to their figures of elevation, thus referring them to the Dunkirk datum. The section between Cohoes and Elmira was run westward based on the old Gristmill bench mark near Albany, and are stamped "A 1898" in addition to the figures of elevation, thus referring them to the Albany datum.

The double-rodged, simultaneous, direct and reverse method was used, with a Buff & Berger precise level, and the rods used were targeted on one side and self-reading on the other. The result of the targeted line in each section was used alone as the adopted line, that face having been tested, the line employing the self-reading faces being used as a check. The closure at Elmira between the two lines was 0.645 foot, but there is a greater difference between the datum of figures stamped on the bench marks on account of an error of 1 foot in the elevation started with in the east section, which was not detected until work was finished.

The elevations used for the aforesaid bench marks prior to 1899 were derived by subtracting 1.085 from the elevations then used by the army engineers, and the aforesaid closure represents the error between the Geological Survey line and the old data furnished by the army engineers, which are now superseded by the recent precise leveling.

The differences of elevation between the various bench marks as shown by the duplicate rodged lines was very small, the final divergence being -0.196 foot for the direct line going eastward and -0.224 foot for the direct line going westward, making a total closure of the target upon the self-reading rod lines $+0.028$ foot at Schenectady. This divergence is far within the limit set for precise leveling.

This line is composed of six elementary lines used in the 1903 adjustment of the precise-level net by the United States Coast and Geodetic Survey, which adjustment supersedes its former adjustment of 1900, in which this line formed but one link, and the previous local adjustment by the Geological Survey deriving elevations for these bench marks published in the Appendix to the Twentieth Annual Report of the Geological Survey, Part I. From Dunkirk eastward the six main junctions with other level lines are at Salamanca, Hornellsville, Elmira, Binghamton, Bainbridge, and Rexford Feeder Bridge (Schenectady).

The corrected elevation for the Nelson Block bench mark is now accepted as 588.866 feet above mean sea level, and the unadjusted line raised to accord with the latter has now been corrected at the other junctions aforesaid, respectively, by the following amounts: $+0.250$, $+0.286$, $+0.236$, $+0.232$, $+0.161$ and -0.005 ; the corresponding distances from Dunkirk being 44.1, 129.3, 187.7, 246.3, 283.6, and 381.8 miles. The algebraic difference between consecutive figures of the first or second lines is the amount distributed or the distance between those points, respectively.

The leveling was done by Mr. E. L. McNair (now topographer) in the field season of 1898.

DUNKIRK, ALONG THE ERIE RAILROAD, TO ELMIRA.

DUNKIRK QUADRANGLE.

	Feet.
Dunkirk, St. Mary's Home and School, Washington avenue, between Third and Fourth streets, in water table 20 feet from northeast corner; aluminum tablet stamped "598 DUNKIRK 1899".....	598.936
Dunkirk, Nelson Block, extreme northwest corner of, on top of water table; chiseled cross...	588.866

CHERRY CREEK QUADRANGLE.

	Feet.
Sheridan, in front of Erie station; top of rail.....	758.3
Forestville, 530 feet west of entrance to waiting room of Erie station, at northeast corner of iron bridge over highway, in bridge seat, 7 feet north of center of track; bronze tablet stamped "871 D" possibly restamped "1348 D".....	871.888
Forestville, in front of Erie station; top of rail.....	875.5
Smiths Mills, in front of Erie station; top of rail.....	1,010.7
Smiths Mills, 2.3 miles east of, 10.5 feet north of center of railway track, under west end of overhead highway bridge; bronze tablet in foundation stone stamped "1097 D 1898".....	1,098.628

GOWANDA QUADRANGLE.

Perrysburg, in front of Erie station; top of rail.....	1,265.1
Perrysburg, 400 feet east of waiting room of Erie station, in keystone at north end of arch culvert under railway; bronze tablet stamped "1261 D".....	1,262.417
Dayton, 950 feet north of Erie station, 37.5 feet east of center of track, coping of tunnel underneath Erie track, second stepstone from top; bronze tablet stamped "1322 D".....	1,322.926
Dayton, in front of Erie station; top of rail.....	1,337.1
Cattaraugus, Union school building, in water table at right of main entrance; bronze tablet stamped "1401 D" (possibly restamped "1384 D").....	1,385.631
Cattaraugus, in front of Erie station; top of rail.....	1,415.2
Little Valley, Cattaraugus County court-house, foundation wall at southwest corner; aluminum tablet stamped "1593 D".....	1,594.244
Little Valley, in front of Erie station; top of rail.....	1,566.5

REDHOUSE QUADRANGLE.

Elkdale, in front of station; top of rail.....	1,464.3
Salamanca, 3.25 miles west of, at southwest corner of iron-girder bridge, bridge seat; bronze tablet stamped "1413 D".....	1,413.771

SALAMANCA QUADRANGLE.

West Salamanca, in front of flag station; top of rail.....	1,372.6
Salamanca, in front of Erie station; top of rail.....	1,387.5
Salamanca, Union school building on Maple street, in water table at right of entrance; aluminum tablet stamped "1391 DUNKIRK-1899".....	1,391.485
Killbuck, in front of flag station; top of rail.....	1,385.6
Carrollton, in front of station; top of rail.....	1,391.0
Carrollton, 475 feet east of Erie station, west pier of Buffalo, Rochester and Pittsburg Railway iron bridge crossing over Erie tracks; bronze tablet stamped "1393 D".....	1,394.641
Vandalia, in front of Erie station; top of rail.....	1,407.8
Allegany, 1.8 miles west of Erie station, on stone arch culvert under Erie Railroad, 75 feet east of road crossing, south end of next to top step; bronze tablet stamped "1408 D".....	1,408.938

OLEAN QUADRANGLE.

Allegany, in front of Erie station; top of rail.....	1,415.8
Olean, in front of Erie station; top of rail.....	1,430.4
Olean, city hall and post-office building on State street, northwest corner of, stone next under water table; bronze tablet stamped "1450 D".....	1,451.790
Hinsdale, in front of Erie station; top of rail.....	1,493.5
Hinsdale, 2.25 miles east of, bridge seat of small girder bridge, 9.5 feet northwest of center of track; bronze tablet stamped "1508 D".....	1,509.288
Cuba, in front of Erie station; top of rail.....	1,534.9
Cuba, 0.5 mile east of Erie station, at south end of pier of stone arch bridge over Union street; aluminum tablet stamped "1517 ALBANY." (This is a new tablet set in 1903 in old hole.).....	1,516.789

BELMONT QUADRANGLE.

Friendship, in front of Erie station; top of south rail.....	1,532.1
Friendship, Union school building, water table at right of main entrance; aluminum tablet stamped "1520 D".....	1,521.036
Belvidere, in front of Erie station; top of north rail.....	1,378.7
Belvidere, 0.67 mile east of, south end of wing wall of abutment at east end of railway bridge over Van Campen Creek, 28 feet south of center of track; bronze tablet stamped "1351 D".....	1,352.248
Belmont, southeast corner of Allegany County jail, in stone foundation; aluminum tablet stamped "1416 D".....	1,417.765
Belmont, in front of Erie station; top of south rail.....	1,384.8

* The above tablet has been destroyed and another has been set in a building (see primary list).

SHONGO QUADRANGLE.

	Feet.
Scio, in front of Erie station; top of south rail.....	1,454.2
Wellsville, at east end of Erie station; top of north rail.....	1,519.6
Wellsville, Union school building, in footstone of arch over northeast corner entrance; aluminum tablet stamped "1519 D".....	1,520.514
Andover, 3 miles west of, stone step of iron-girder railroad Bridge No. 8; bronze tablet stamped "1573 D".....	1,574.208
Andover, in front of Erie station, main track; top of south rail.....	1,650.2
Andover, 2 miles east of, stone foundation at southeast corner of small railway bridge; bronze tablet stamped "1675 D".....	1,676.105
Tip Top Summit, opposite water tank; top of south rail.....	1,773.2

CANASERAGA QUADRANGLE.

Alfred, 0.4 mile west of, east end of Bridge No. 4 over road and creek; top of north rail.....	1,607.7
Alfred, Erie station, water table under front office window, facing track; aluminum tablet stamped "1610 D".....	1,611.391

HORNELLVILLE QUADRANGLE.

Almond, in front of Erie station; top of rail.....	1,395.0
Almond, 950 feet east of Erie station, bridge foundation at northwest corner of small railroad bridge over highway; aluminum tablet stamped "1383 D".....	1,382.914
Hornellsville, in front of Erie station; top of rail.....	1,152.8
Hornellsville, 0.7 mile east of Erie station, foundation wall at northeast corner of iron railroad bridge; aluminum tablet stamped "1141 D".....	1,142.481
Canisteo, in front of Erie station; top of south rail.....	1,128.0
Canisteo, 2.1 miles east of, bridge seat at northeast corner of iron-girder Bridge No. 87; aluminum tablet stamped "1113 D".....	1,114.092
Adrian, in front of Erie station; top of south rail.....	1,101.7

BATH QUADRANGLE.

Adrian, 3.7 miles east of, in face of rock cliff on east side of Erie Railroad and highway, 400 feet northeast of highway bridge across Canisteo River, 25 feet from east rail; bronze tablet stamped "1080 D".....	1,081.183
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CAMERON QUADRANGLE.

Cameron, in front of Erie station; top of north rail.....	1,047.8
Cameron, 180 feet west of Erie station, in stone foundation of railroad water tank; bronze tablet stamped "1048 D".....	1,048.915
Cameron Mills, in front of Erie station; top of north rail.....	1,033.3
Rathbone, general merchandise store of F. G. Martin (building owned by O. O. Whittemore), foundation stone at right of main entrance; bronze tablet stamped "1006 D".....	1,007.041
Rathbone, in front of Erie station; top of south rail.....	1,008.6

CORNING QUADRANGLE.

Addison, in front of Erie station; top of north rail, west-bound track.....	985.5
Addison, 0.4 mile east of Erie station and 750 feet northwest of tracks, Union school building, at right of main entrance; aluminum tablet stamped "1021 D".....	1,022.554
Erwins, in front of station; top of rail, east-bound track.....	965.2
Painted Post, 0.8 mile west of, in masonry wall of open culvert, east wall of culvert and south side of railroad track; bronze tablet stamped "935 D".....	936.195
Painted Post, in front of Erie station, east-bound track; top of south rail.....	938.4
Corning, in front of station; top of rail.....	936.3
Corning, city hall, corner of Erie and Cedar streets, foundation stone under water table at right of Cedar street entrance; aluminum tablet stamped "935 D".....	936.759
East Corning, in front of station; top of south rail.....	909.3

ELMIRA QUADRANGLE.

Big Flats, 1.25 miles west of, in bridge seat at southwest corner of Erie Railroad Bridge No. 67 A; bronze tablet stamped "899 D".....	900.815
Big Flats, in front of Erie station; top of south rail, west-bound track.....	910.8
Horseheads, in front of Erie station, west-bound track; top of north rail.....	903.4
Horseheads, 0.35 mile southwest of Erie station, on pier of Lackawanna Railroad bridge at crossing of Northern Central Railway, 50 feet south of center of north-bound track of Northern Central Railway; aluminum tablet stamped "901 D".....	902.111

Horseheads, Northern Central station; northeast corner of stone doorsill of men's waiting room.....	Feet. 900.113
Elmira, Erie station, east-bound track, opposite distance board; top of south rail.....	857.3
Elmira, city hall, corner of Church and Lake streets, stone pedestal of lamp-post at left of Lake street entrance; aluminum tablet stamped "857 ALBANY".....	858.626

ELMIRA, ALONG THE ERIE RAILROAD, TO BINGHAMTON.

Elmira, 0.5 mile east of Erie station, in stone foundation at west end of Erie Railroad bridge across Chemung River, between nearest east-bound tracks; head of iron bolt, chisel mark...	854.593
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WAVERLY QUADRANGLE.

Wellsburg, 1,800 feet west of station, at southeast corner of Bridge No. 55, in coping stone of abutment; aluminum tablet stamped "824 A".....	823.204
Wellsburg, in front of station, east-bound track; top of south rail.....	825.2
Chemung, 1 mile west of station, at northeast corner of Bridge No. 53 across Chemung River, in coping stone of abutment; aluminum tablet stamped "804 A".....	803.077
Chemung, in front of Erie station, west-bound track; top of north rail.....	811.3
Waverly, in front of Erie station, west-bound track; top of north rail.....	829.9
Waverly, city hall building on Broad street, stone column between doorways; aluminum tablet stamped "840 A".....	839.336

OWEGO QUADRANGLE.

Barton, in front of Erie station, west-bound track; top of north rail.....	797.6
Barton, 1.2 miles east of, southeast corner of Bridge No. 40, in coping stone of abutment; aluminum tablet stamped "798 A".....	797.517
Smithboro, in front of Erie station, west-bound track; top of south rail.....	793.1
Tioga Center, in front of Erie station, west-bound track; top of south rail.....	797.7
Owego, 2.25 miles west of Erie station, southeast corner of Bridge No. 37, in coping stone of abutment; aluminum tablet stamped "815 A".....	815.028
Owego, 700 feet west of station, west-bound track at crossing of Ithaca branch of Lackawanna Railroad; top of north rail.....	816.6
Owego, in front of Erie station, west-bound track; top of north rail.....	816.9

APALACHIN QUADRANGLE.

Owego, 2.75 miles east of Erie station, northwest corner of Bridge No. 33, in coping stone; aluminum tablet stamped "812 A".....	811.679
Campville, in front of station; top of north rail.....	824.9
Union, 1.4 miles west of, northwest corner of Bridge No. 31, across Nanticoke Creek, in coping stone of wing wall of abutment; bronze tablet stamped "825 A".....	828.353
Union station, in front of station, east-bound track; top of south rail.....	835.2
Hooper, in front of station; top of south rail, west-bound track.....	834.5

BINGHAMTON QUADRANGLE.

Lestershire, in front of station, east-bound track; top of south rail.....	848.1
Binghamton, Broome County court-house, west end of, at left of basement entrance from Collier street; aluminum tablet stamped "867 A".....	866.056
Binghamton, in front of Erie and Delaware and Hudson station, west-bound track; top of north rail.....	863.5
Binghamton, 1 mile east of, at crossing of Delaware and Hudson and Syracuse, Binghamton and New York railroads; top of south rail.....	852.6

BINGHAMTON, ALONG THE DELAWARE AND HUDSON CANAL COMPANY'S RAILROAD, TO SCHENECTADY.

Port Crane, 3.25 miles west of, 900 feet west of road crossing, in parapet wall at east end of culvert under railway; bronze tablet stamped "959 A".....	958.519
Port Crane, in front of station; top of north rail.....	1,041.8
Sanitaria Springs, in front of station; top of north rail.....	1,117.0
Sanitaria Springs, 0.33 mile east of station, northeast corner of Bridge No. 107 over highway, in coping stone of abutment; bronze tablet stamped "1126 A".....	1,125.617

NINEVEH QUADRANGLE.

Tunnel, 0.5 mile west of station, at southeast corner of Bridge No. 104, crossing over road, in coping stone of abutment; bronze tablet stamped "1384 A".....	1,384.002
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	Feet.
Tunnel, in front of station; top of north rail.....	1,415.2
Harpersville station, 1,250 feet west of, southwest corner of iron-trestle Bridge No. 97, in coping stone of abutment; bronze tablet stamped "1051 A".....	1,049.041
Harpersville, in front of station; top of north rail.....	1,053.7
Nineveh, in front of station; top of north rail.....	1,033.7
Afton, in front of station; top of north rail.....	982.0
Afton, 1,050 feet northeast of, northeast corner of iron-girder Bridge No. 904, crossing over highway, in coping stone of abutment; bronze tablet stamped "973 A".....	972.782

SIDNEY QUADRANGLE.

Bainbridge, 2 miles south of, northeast corner of small cattle-pass opening, in foundation stone; bronze tablet stamped "978 A".....	977.676
Bainbridge, in front of station; top of north rail.....	1,006.2
Bainbridge, 2.75 miles east of, southeast corner of Bridge No. 84, in coping stone of abutment; bronze tablet stamped "989 A".....	989.674
Sidney, 0.25 mile west of Delaware and Hudson station, at crossing of Delaware and Hudson and New York, Ontario and Western railroads; top of rail.....	990.9
Sidney, in front of Delaware and Hudson station; top of south rail.....	993.1
Unadilla, in front of Delaware and Hudson station; top of south rail.....	1,025.0
Unadilla, Union school building, foundation wall at left of main entrance; aluminum tablet stamped "1024 A".....	1,023.325

ONEONTA QUADRANGLE.

Wells Bridge, 300 feet west of station, northeast corner of highway bridge across Susquehanna River, in coping stone of abutment; bronze tablet stamped "1047 A".....	1,046.657
Wells Bridge, in front of Delaware and Hudson station; top of south rail.....	1,049.5
Otego, in front of Delaware and Hudson station; top of rail.....	1,063.9
Otego, 1 mile east of, southeast corner of culvert, third step from top; bronze tablet stamped "1051 A".....	1,050.145
Oneonta, State Normal School, in face of west pillar at main entrance; aluminum tablet stamped "1232 A".....	1,231.912
Oneonta, in front of Delaware and Hudson station; top of north rail.....	1,083.9
Oneonta, Delaware and Hudson station; southwest corner of doorsill of door into waiting room and dining hall (door faces track and is east of office window).....	1,086.469

DELHI QUADRANGLE.

Colliers, in front of Delaware and Hudson station; top of rail.....	1,119.3
Colliers, 700 feet east of, bridge No. 54 across Susquehanna River; northeast corner of coping stone of east abutment; bronze tablet stamped "1119 A".....	1,118.493
Cooperstown Junction, in front of station; top of rail.....	1,127.3

COOPERSTOWN QUADRANGLE.

Maryland, 1.9 miles west of, southeast corner of Bridge No. 51 across Schenevus Creek, in parapet wall; bronze tablet stamped "1170 A".....	1,169.850
Maryland, in front of Delaware and Hudson station; top of north rail.....	1,213.4
Schenevus, in front of Delaware and Hudson station; top of south rail.....	1,276.3
Schenevus, 0.25 mile east of Delaware and Hudson station, southeast corner of bridge across Schenevus Creek, in coping stone of abutment; bronze tablet stamped "1272 A".....	1,271.387
Worcester, 80 feet west of west end of Delaware and Hudson station, foundation of railroad water tank, third course of stone, east side of tank; aluminum tablet stamped "1311 A".....	1,310.160

RICHMONDVILLE QUADRANGLE.

Worcester, in front of Delaware and Hudson station; top of north rail.....	1,306.4
East Worcester, 0.75 mile west of, north end of center pier of railroad bridge or large culvert; aluminum tablet in capstone stamped "1406 A".....	1,405.207
East Worcester, in front of Delaware and Hudson station; top of north rail.....	1,434.5
Richmondville, 0.6 mile west of, northeast corner of Delaware and Hudson Railroad bridge No. 31, in coping stone of east abutment wall; bronze tablet stamped "1224 A".....	1,223.062
Richmondville, in front of Delaware and Hudson station; top of south rail.....	1,185.9
Cobleskill, 1 mile west of, south end of culvert at west side of road crossing; chiseled square.....	949.23

SCHOHARIE QUADRANGLE.

Cobleskill, Union school building, stone foundation at northwest corner; bronze tablet stamped "930 A".....	929.604
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	Fect.
Cobleskill, in front of Delaware and Hudson station; top of north rail.....	909. 1
Barnerville, crossing, on rock 50 feet north of railroad; chiseled square.....	903. 833
Barnerville, crossing, in front of station; top of north rail.....	906. 1
Howe Cave, in front of Delaware and Hudson station; top of south rail.....	795. 4
Howe Cave, 1.2 miles east of, bridge seat at northwest corner of small bridge or open culvert; bronze tablet stamped "731 A".....	730. 725
Central Bridge, in front of Delaware and Hudson station; top of north rail.....	621. 1
Schoharie Junction, in front of Delaware and Hudson station; top of north rail.....	598. 8
Esperance, 1,250 feet west of Delaware and Hudson station, north end of stone culvert under Delaware and Hudson Railroad, in coping stone; bronze tablet stamped "753 A".....	752. 440
Esperance in front of Delaware and Hudson station; top of north rail.....	768. 0

BERNE QUADRANGLE.

Delanson, in front of Delaware and Hudson station; top of south rail.....	812. 5
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AMSTERDAM QUADRANGLE.

Duanesburg, 1,000 feet west of Delaware and Hudson station, north end of east abutment of bridge; bronze tablet stamped "681 A".....	680. 822
Duanesburg, in front of Delaware and Hudson station; top of south rail.....	676. 6
Kelleys, at station; top of rail.....	490. 9
Kelleys, 1.75 miles east of, 750 feet east of highway, at east abutment of cattle and wagon pass, in coping stone; bronze tablet stamped "410 A".....	400. 008
South Schenectady, at road crossing of West Shore and Delaware and Hudson railroads; top of rail.....	349. 1

SCHENECTADY QUADRANGLE.

Schenectady, New York Central and Hudson River Railroad bridge over Erie Canal, north- east corner of coping stone of abutment wall; bronze tablet stamped "242 A".....	241. 195
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SCHENECTADY, ALONG THE ERIE CANAL, TO COHOES.

Schenectady, 4 miles east of, Rexford Feeder Bridge, Erie Canal; coping 1.5 feet from south corner west abutment.....	217. 244
Rexford, 3.5 miles east of; coping stone on south corner of east wall of west Lock No. 20....	208. 305
Rexford, 3.5 miles east of; top of screw bolt fastening down collar of southwest gate of west Lock No. 20.....	208. 396
Rexford, 6.5 miles east of; top of projection of stone on second course of masonry at east cor- ner of south abutment of second canal bridge below Lock No. 19.....	190. 870

COHOES QUADRANGLE.

Cohoes, 3.5 miles west of, east end of lower Mohawk Aqueduct, southwest corner of parapet wall; chiseled cross inclosed by circle.....	194. 608
Cohoes, on top of wall west side of mill race between Locks Nos. 15 and 16, 6 inches from north- east corner of small brick building between mill race and towpath; chiseled cross.....	159. 404
Cohoes, Lock No. 15, on east wall, south end of west lock; cross cut on second foot-iron clamp, (U. S. Engineer Corps bench mark).....	159. 890
Cohoes, Lock No. 15, southwest corner of east wall of west lock; top of point of coping.....	159. 810

CHENANGO, DELAWARE, MADISON, ONEIDA, AND OTSEGO
COUNTIES.DEPOSIT, HANCOCK, NEW BERLIN, ONEONTA, ORISKANY, SIDNEY, UTICA, WALTON, WIN-
FIELD, AND SANGERFIELD QUADRANGLES.

The elevations in the following list are the result of a line of precise leveling over the following route. A small circuit was first run in Utica, recovering various bench marks of other level lines, and closed with an error of 0.01 foot in a total distance of 4.0 miles of double-rodged, direct and reverse, simultaneous lines. The main line thence continues south from Lock No. 46 to a connection near Sidney, or 2.7 miles east of Bainbridge, with the precise-level line run in 1899 by Mr. E. L. McNair, topographer, the results of which were published in the Appendix to the Twentieth Annual Report of the Geological Survey, Part I, and are republished in this bulletin as corrected by the 1903 adjustment.

Continuing thence south a final connection was made 0.7 mile north of Hancock to the precise-level line run in 1900 by Mr. C. H. Semper, levelman, the results of which appear in this bulletin. Thus are formed two elementary lines of the precise-level net, 63.6 miles and 43.9 miles, respectively, with a total divergence in each section of only 0.02 foot between the direct and reverse simultaneous lines, though the maximum local divergence amounted to 0.04 foot in a stretch of 5 miles and 0.05 foot in another of 7 miles.

The adjustment of the precise-level net made in the spring of 1903 by the United States Coast and Geodetic Survey, in which these lines became factors, resulted in increasing the elevation by the unadjusted line 0.119 foot at Sidney with respect to Utica, and 0.078 foot at Hancock with respect to Sidney. The elevations here listed result from said adjustment.

A Buff & Berger precise level was used with a 4-inch second vial, and the double-simultaneous method. The leveling was done during part of July, August, and September, 1901, by Mr. D. H. Baldwin, topographer in charge. All standard bench marks are stamped with the letters "ALBANY" in addition to the figures of elevation and year.

UTICA QUADRANGLE.

	Feet.
Utica, Deep Waterways bench mark, about 50 feet north of north bank of Mohawk River and about 830 feet northeast from northeast corner of railroad bridge over Mohawk River, Black River branch of the New York Central and Hudson River Railroad; copper nail in root of elm tree.....	405.083
Utica, post-office, west side of east of two rear entrances in basement area on building wall; bronze tablet stamped "419 feet".....	417.207
Utica, Seneca Street Bridge, southeast corner of lower step, west wing towpath (north) abutment; chiseled square.....	430.14
Utica, Whitesboro Street Bridge, old bench mark in new position on top of southeast corner of stone platform at base of east stairs, towpath abutment, about 3 feet above towpath; chiseled circle stamped "B. M." on south face.....	431.56
Utica, Whitesboro Street Bridge (State engineer's B. M. No. 222), southwest corner of stone platform base of west stairs, towpath abutment, 3 feet below towpath; copper bolt.....	431.637
Utica, Lock No. 46 (State engineer's B. M. No. 223), northeast hollow quoin, towpath lock, between anchors; copper bolt.....	430.410

UTICA, SOUTH ALONG THE DELAWARE, LACKAWANNA AND WESTERN, THE UNADILLA VALLEY, AND THE NEW YORK, ONTARIO AND WESTERN RAILROADS, TO SIDNEY.

ORISKANY QUADRANGLE.

Utica, Pleasant avenue, Delaware, Lackawanna and Western Railroad crossing; top of east rail.....	477.8
New Hartford, junction with trolley at station; top of east rail.....	537.7
Washington Mills, crossing; top of east rail.....	616.6
Willowvale, crossing; top of east rail.....	658.1
Chadwick, 0.5 mile north of, 75 feet west of Delaware, Lackawanna and Western Railroad track, brick storehouse of Utica-Willowvale Bleaching Company, in sandstone water table at east end of north wall; aluminum tablet.....	690.719
Chadwick, crossing at station; top of east rail.....	721.4
Saquoit, crossing at station; top of east rail.....	822.4

WINFIELD QUADRANGLE.

Clayville, in front of station; top of east rail.....	985.4
Richfield Junction, in front of new station; top of east rail, main track.....	1,176.7
Richfield Junction, 0.36 mile south of, on south end of foundation wall of wooden trestle bent under overhead highway bridge, west side of track; aluminum tablet stamped "1221 ALBANY 1901".....	1,221.512
Richfield Junction, 1.15 miles south of, about 250 feet north of red tool house, summit of railroad; top of east rail.....	1,271.6

SANGERFIELD QUADRANGLE.

Richfield Junction, 2.84 miles south of, at North Bridgewater crossing near old milk station; top of east rail.....	1,235.9
Bridgewater, in front of station; top of east rail.....	1,198.1

LINE CONTINUED SOUTH ALONG THE UNADILLA VALLEY RAILWAY.

	Feet.
Leonardsville, at southeast corner of milk station, in face of corner stone of foundation; aluminum tablet stamped "1152 ALBANY 1901".....	1,152.551
Leonardsville, at crossing near station; top of east rail.....	1,148.7
West Edmeston, crossing; top of east rail.....	1,138.8
West Edmeston, northeast corner of highway bridge, on coping stone of east abutment; chiseled square.....	1,134.21

NEW BERLIN QUADRANGLE.

West Edmeston, 1.55 miles south of, southwest corner of highway bridge, on coping stone of foundation; chiseled square.....	1,127.18
Sweets, road crossing near station; top of east rail.....	1,123.8
South Edmeston, at road crossing; top of east rail.....	1,111.0
South Edmeston, 0.2 mile east of railroad, northeast corner of highway bridge, on top stone of foundation; aluminum tablet stamped "1110 ALBANY 1901".....	1,109.984
New Berlin, New York, Ontario and Western Railway bridge No. 52, near northwest end of center pier, on top of coping stone; aluminum tablet stamped "1089 ALBANY 1901".....	1,089.231

LINE CONTINUED SOUTHWEST ALONG THE NEW YORK, ONTARIO AND WESTERN RAILWAY.

New Berlin, opposite New York, Ontario and Western station; top of southeast rail.....	1,093.4
New Berlin, 1.01 miles south of, south side of stone-arch highway bridge, on face of keystone; chiseled cross.....	1,091.32
Sage, crossing near flag station; top of east rail.....	1,085.1
New Berlin Center, in front of flag station; top of east rail.....	1,073.6
Davis, crossing; top of east rail.....	1,074.0
South New Berlin, railroad crossing south of station; top of east rail.....	1,057.0
South New Berlin, Baptist Church, under front window, north side of entrance, near northwest corner of building, in third course of brick above water table; aluminum tablet stamped "1059 ALBANY 1901".....	1,059.667
New Berlin, 1.21 miles south of, southeast corner of railroad bridge, on abutment; chiseled square.....	1,074.24
Holmesville, in front of station, main track; top of east rail.....	1,067.8

SIDNEY QUADRANGLE.

Holmesville, 1.77 miles south of, southeast abutment of wooden railroad bridge; chiseled square.....	1,054.54
White's store, in front of station; top of east rail.....	1,072.8
Lathams Corners, at north crossing; top of east rail.....	1,049.9
Rockwells Mills, at crossing near station, main track; top of east rail.....	1,055.4
Mount Upton, Methodist Church, north side of front (east) entrance, in third course of foundation stone above ground; aluminum tablet stamped "1035 ALBANY 1901".....	1,035.710
Mount Upton, in front of station; top of east rail.....	1,047.2
Mount Upton, 2.38 miles south of, northwest corner of large iron highway bridge over Unadilla River, 150 feet east of track, on coping; chiseled square.....	1,017.07
Rockdale, in front of station; top of east rail.....	1,020.18
New Berlin Junction, at highway crossing, on New York, Ontario and Western Railway; top of east rail, main line.....	1,084.4

LINE CONTINUED SOUTH, ALONG THE MAIN LINE OF THE NEW YORK, ONTARIO AND WESTERN RAILWAY, TO SIDNEY, THENCE WEST.

Sidney at junction, grade crossing of Delaware and Hudson and New York, Ontario and Western Railways, top of rail.....	990.9
Bainbridge, 2.7 miles east of, on coping stone at southwest corner of bridge No. 84; bronze tablet stamped "989 ALBANY 1901".....	989.674

SIDNEY, ALONG THE NEW YORK, ONTARIO AND WESTERN RAILWAY, SOUTHEAST TO WALTON, THENCE SOUTHWEST TO HANCOCK.

SIDNEY QUADRANGLE.

South Unadilla, in front of station; top of east rail.....	1,159.3
Youngs, in front of station; top of north rail.....	1,238.3
Maywood, in front of station; top of east rail.....	1,386.5
Maywood (Sidney Center), trestle No. 216, under north side of third trestle tower from east end, in top of old pier; aluminum tablet stamped "1344 ALBANY 1901".....	1,344.405

ONEONTA QUADRANGLE.

	Feet.
Franklin station, crossing; top of north rail.....	1,582.2
Merrickville, at crossing; top of north rail.....	1,700.0
Northfield, 0.37 mile northwest of, 30 feet south of south end of Zigzag tunnel, vertical face of rock on west side of track about 6 feet above rail; aluminum tablet stamped "1766 ALBANY 1901".....	1,766.900
Northfield, 0.37 mile northwest of, at railroad summit, north end of oil house; top of east rail.....	1,765.1
Northfield, in front of station; top of northeast rail.....	1,757.2

WALTON QUADRANGLE.

Northfield, 5.95 miles southeast of, southeast corner of bridge, on foundation stone; chiseled square.....	1,312.68
Walton, in front of station; top of rail.....	1,233.4
Walton, southwest corner of North and Gardiner streets, northeast corner of Ogden Free Library, east face of corner of water table; aluminum tablet stamped "1215 ALBANY 1901".....	1,216.051
Pine, switch crossing; top of southeast rail.....	1,201.1
Beerston, at crossing, main track; top of south rail.....	1,181.3
Rock Rift, 0.5 mile north of, 150 feet south of crossing, on east side of track, 4 feet above rail, on face of ledge; aluminum tablet stamped "1214 ALBANY 1901".....	1,214.760
Rock Rift, in front of station; top of east rail.....	1,226.8

DEPOSIT QUADRANGLE.

Apex, 0.45 mile north of, at railroad summit; top of east rail.....	1,461.3
Apex, in front of station; top of east rail.....	1,445.1

HANCOCK QUADRANGLE.

Cadosia, 0.17 mile west of, at west abutment of trestle No. "B 1," on south corner coping stone of parapet wall; aluminum tablet stamped "990 ALBANY 1901".....	990.572
Hancock, in front of Erie station, north-bound track; top of north rail.....	923.7
Hancock, southeast corner of Bridge No. 18, on foundation stone; chiseled square.....	912.74
Hancock, 0.75 mile north of, southeast corner of large steel Bridge No. 19, top of parapet wall, 6 feet east of rail; bronze tablet stamped "924 ALBANY 1900".....	924.721

BROOME, DELAWARE, ORANGE, SULLIVAN, AND ULSTER COUNTIES.

BINGHAMTON, DEPOSIT, GOSHEN, HANCOCK, NARROWSBURG, NEWBURG, NINEVEH, LONG EDDY, POUGHKEEPSIE, AND PORT JERVIS QUADRANGLES.

The elevations in the following list are the result of a line of precise levels run from Binghamton to Poughkeepsie. The two sections of this line, Binghamton to Hancock and Hancock to Poughkeepsie, form links in the net of precise leveling 49 and 138 miles, respectively, in length. The result of the 1903 adjustment was to increase the elevation at Hancock with respect to Binghamton 0.042 foot and to increase the elevation at Poughkeepsie with respect to Hancock 0.423 foot. The double-simultaneous method was employed, with a Buff & Berger precise level and an 8-second vial. The Pennsylvania portions of this line will be published under Pennsylvania.

The leveling was done during June, July, and August, 1900, by Mr. C. H. Semper, levelman. The standard bench marks are referred to the Albany datum and are stamped with the letters "ALBANY" in addition to the figures of elevation.

BINGHAMTON, ALONG ERIE RAILROAD VIA HANCOCK, TO MIDDLETOWN.

BINGHAMTON QUADRANGLE.

	Feet.
Binghamton, Broome County court-house, west end of, at left of basement entrance from Collier street; aluminum tablet stamped "867 A".....	866.056
Langdon, 1,000 feet north of station, top of south abutment west side of creek culvert; bronze tablet stamped "860 ALBANY 1900".....	860.468
Langdon, in front of station; top of rail.....	864.4
Kirkwood, in front of station, north-bound track; top of rail.....	871.6

e From this point via Main street downhill to Erie station, thence northwest to tablet.

	Feet.
Kirkwood, 0.5 mile south of, retaining wall of signal tower, in northwest corner, 7 feet north-west of tower house; railroad spike in top of timber of retaining wall.....	872.52
Riverside, in front of station; top of rail.....	869.8

NINEVEH QUADRANGLE.

Gulf Summit, at railroad crossing near station, north-bound track; top of rail.....	1,363.5
Oquaga, at railroad crossing by station, north-bound track; top of rail.....	1,153.6

DEPOSIT QUADRANGLE.

Deposit, 1 mile west of, iron bridge over river, south wing of east abutment; bronze tablet marked "1026 ALBANY 1900".....	1,026.543
Deposit, in front of station, north-bound track; top of rail.....	1,003.7
Deposit, 4.4 miles south of, north abutment of iron bridge, west side, top of bridge seat; bronze tablet stamped "978 ALBANY 1900".....	978.972
Hales Eddy, in front of station, north-bound track; top of rail.....	973.3

HANCOCK QUADRANGLE.

Hancock, 0.7 mile northwest of, large steel bridge, on top of parapet wall, 6 feet east of rail; bronze tablet stamped "924 ALBANY 1900".....	924.721
Hancock, in front of station, north-bound track; top of rail.....	923.7
Stockport, in front of station, north-bound track; top of rail.....	891.9
Stockport, 1.1 miles south of, Bridge No. 17, west abutment, south side, on top of second step; bronze tablet stamped "882 ALBANY 1900".....	882.904

LONG EDDY QUADRANGLE.

Lordville, opposite milepost "J. C. 153 B. 271", north-bound track; top of rail.....	869.3
Lordville, at railroad station, suspension bridge over Delaware River, in face of north abutment; bronze tablet stamped "865 ALBANY 1900".....	865.915
Long Eddy, 400 feet north of station, girder bridge, east side of south abutment, in top of bridge seat; bronze tablet stamped "834 ALBANY 1900".....	835.195
Long Eddy, in front of station, north-bound track; top of rail.....	836.7
Hankins, in front of station, north-bound track; top of rail.....	807.5
Hankins, 1 mile south of, 100 feet west of milepost "J C 141", south side of railroad, in west abutment of small bridge over creek; aluminum tablet stamped "801 ALBANY 1900".....	802.015
Callicoon, in front of station, north-bound track; top of rail.....	782.3
Callicoon, 900 feet south of station, railroad girder bridge over Delaware River, top of north abutment, east side; bronze tablet stamped "780 ALBANY 1900".....	780.683

NARROWSBURG QUADRANGLE.

Cohecton, 100 feet north of station, railroad bridge over highway, top of north abutment, east side; bronze tablet stamped "746 ALBANY 1900".....	746.777
Cohecton, in front of station, north-bound track; top of rail.....	749.0
Narrowsburg, in front of station, north-bound track; top of rail.....	715.6
Narrowsburg, 600 feet west of station, 100 feet west of east end of rock cut, north side; bronze tablet stamped "718 ALBANY 1900".....	718.717
Tusten, in front of station, north-bound track; top of rail.....	684.6

PORT JERVIS QUADRANGLE.

Sparrowbush, in front of station, north-bound track; top of rail.....	473.4
Port Jervis, Erie Railroad bridge over East Main street, top of south abutment, west side, first step below bridge seat; bronze tablet stamped "456 ALBANY 1900".....	457.077
Guymard, 600 feet north of station, railroad culvert, top of north abutment, west side; bronze tablet stamped "780 ALBANY 1900".....	780.914
Otisville, 500 feet west of station, small railroad bridge over private road, west abutment, north side, top of bridge seat; bronze tablet stamped "861 ALBANY 1900".....	862.219
Otisville, in front of station, west-bound track; top of rail.....	857.5

GOSHEN QUADRANGLE.

Howells, in front of station, west-bound track; top of rail.....	688.2
Middletown, in front of station, west-bound track; top of rail.....	562.1
Middletown, Clemson Brothers' saw shop, in front face of brickwork, left of office entrance; bronze tablet stamped "558 ALBANY 1900".....	558.919

**MIDDLETOWN, ALONG NEW YORK, ONTARIO AND WESTERN RAILWAY,
TO CAMPBELL HALL.**

	Feet.
Mechanicstown, in front of station; top of rail.....	482.0
Crystal Run, in front of station; top of rail.....	419.0
Stony Ford, in front of station; top of rail.....	372.4
Campbell Hall, Campbell Hall Hotel, south face of brickwork; bronze tablet stamped "408 ALBANY 1900".....	409.078

**CAMPBELL HALL, NORTH ALONG WALLKILL VALLEY RAILROAD,
TO WALDEN, THENCE TO EAST WALDEN, AND ALONG CEN-
TRAL NEW ENGLAND RAILWAY TO POUGHKEEPSIE.**

NEWBURG QUADRANGLE.

Neeleytown, in front of station; top of rail.....	376.5
Beaver Dam, in front of station; top of rail.....	403.7
Walden, National Bank, southwest corner; aluminum tablet stamped "376".....	375.136
St. Elmo, in front of station; top of rail.....	435.2
Modena, in front of station; top of rail.....	465.8
Moubray, in front of station; top of rail.....	454.2
Elting, in front of station; top of rail.....	421.0
Clintondale, in front of station; top of rail.....	386.3
Lloyd, street railroad in front of station; top of rail.....	353.6
Lloyd, Centerville Hotel, southeast corner; bronze tablet stamped "359".....	358.177

POUGHKEEPSIE QUADRANGLE.

Poughkeepsie, corner of Main and Washington streets; in front face of city hall; aluminum tablet stamped "173 A".....	172.991
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CHEMUNG COUNTY.

ELMIRA QUADRANGLE.

The following elevations are a portion of the results of a line of precise levels run in 1899 by Mr. C. H. Semper, levelman, south over the Northern Central Railway to Williamsport, Pa. The remainder of results and a fuller description of this line will be published under Pennsylvania.

**ELMIRA, SOUTH ALONG THE NORTHERN CENTRAL RAILWAY, TO
WILLIAMSPORT, PA.**

	Feet.
Southport, in front of station; top of east rail.....	854.3
Elmira, 7 miles south of, creek and cattle-pass culvert, west side of railroad, in wall; bronze tablet stamped "1067 HARRISBURG 1899".....	1,068.338
State boundary (New York-Pennsylvania) line post, opposite; top of rail.....	1,096.7

ALLEGANY, LIVINGSTON, MONROE, AND STEUBEN COUNTIES.

**CALEDONIA, CANASERAGA, HONEOYE, HORNELLSVILLE, NUNDA, AND ROCHESTER
QUADRANGLES.**

The elevations in the following list are the result of a line of precise leveling, based upon the Rochester datum connecting the Lake Survey gage bench mark at Charlotte with the State engineer's level line of 1901 at Rochester and continued south to a final connection at Hornellsville with the precise-level line run by Mr. E. L. McNair, topographer, in 1899.

This line forms an element in the precise-level net and a factor in the 1903 adjustment of the same made by the United States Coast and Geodetic Survey. The amount of correction this line received by this adjustment is 0.084 foot in a total distance of 88.4 miles, the original elevation at Hornellsville by this line being lowered with respect to Charlotte. The total divergence of the direct and reverse, simultaneous roddeed lines is 0.096 foot.

The double-simultaneous method was employed, with a Buff & Berger precise level and a 4-second vial. The leveling was done during part of September, 1901, and part of

August and September, 1902, by Mr. D. H. Baldwin, topographer in charge. All standard bench marks dependent on this datum are stamped with the letters "ROCHESTER" in addition to the figures of elevation and year.

CHARLOTTE, SOUTH ALONG THE NEW YORK CENTRAL, THE PENNSYLVANIA, THE LEHIGH VALLEY, THE PITTSBURG, SHAWMUT AND NORTHERN, AND THE ERIE RAILROADS, VIA ROCHESTER AND NUNDA, TO HORNELLSVILLE.

ROCHESTER QUADRANGLE.

	Feet.
Charlotte, 0.22 mile northeast of New York Central station, old light-house, upper side of water table at south-southeast angle, east of the south window; chiseled cross (U. S. L. S. B. M.).....	283.168
Barnard, crossing; top of northwest rail.....	401.4
Little Ridge crossing; top of west rail.....	432.1
Rochester, Ridgeway avenue, or Big road crossing; top of west rail.....	472.1
Rochester, highway bridge No. 87, over barge canal, south abutment, east wing; chiseled square on lowest step.....	512.22
Rochester (State engineer's bench mark No. 457), Rowe Street Bridge No. 86, near towpath, on foundation under east tower; chiseled square.....	512.64
Rochester, Rowe Street Bridge (Buffalo, Rochester and Pittsburg Railway), southwest corner, on parapet stone; chiseled square.....	527.10
Rochester, Buffalo, Rochester and Pittsburg Railway bridge over Niagara Falls Railroad, southwest corner, on parapet wall; chiseled square.....	548.81
Rochester, Buffalo, Rochester and Pittsburg Railway bridge over New York Central Railroad; top of west rail.....	561.5
Rochester, grade crossing of Buffalo, Rochester and Pittsburg main line over Pennsylvania (branch) Railroad; top of rail.....	543.4

LINE CONTINUED SOUTH ALONG THE PENNSYLVANIA RAILROAD.

Rochester, 0.22 mile south of, Buffalo, Rochester and Pittsburg Railway crossing, west of track, near north end of stone culvert; chiseled square.....	538.32
Genesee Junction, West Shore Railroad bridge, northeast corner, near northwest corner of parapet stone; chiseled square.....	524.75
Genesee Junction, in front of station; top of east rail.....	526.0
Genesee Junction, 1.49 miles south of, southeast corner of small bridge over old canal, coping of foundation wall; chiseled square.....	525.90
Whites, road crossing, near flag station; top of east rail.....	527.1
Whites, 0.72 mile south of, old lock, west side wall, south quoin between anchors; chiseled square.....	530.93
Severance, in front of flag station; top of east rail.....	532.6
Severance, 640 feet south of, northwest corner of bridge over canal, on coping stone; chiseled square.....	531.38
Severance, 2.23 miles south of, northeast corner of highway bridge over canal, on coping stone; chiseled square.....	534.53
Scottsville, 800 feet north of station, south side of creek overflow dam, on top of stone pier; bronze tablet stamped "537 ROCHESTER 1902".....	535.447
Scottsville, in front of station, main track; top of west rail.....	538.4

HONEOYE QUADRANGLE.

Scottsville, 1.75 miles south of, southwest corner of culvert, on coping stone; chiseled square..	540.30
Honeoye Junction, in front of flag station; top of east rail.....	537.3
Honeoye Junction, Lehigh Valley Railroad bridge No. 34, northeast corner, near corner of foundation coping stone; chiseled square.....	553.584

LINE CONTINUED EAST ALONG LEHIGH VALLEY RAILROAD.

Genesee Valley Junction, grade crossing of Erie and Lehigh Valley railroads; top of rail....	538.8
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CALEDONIA QUADRANGLE.

LINE CONTINUED ALONG THE ERIE RAILROAD SOUTHWEST TO AVON, THENCE ALONG THE PENNSYLVANIA RAILROAD.

Avon, near Pennsylvania Railroad station, road crossing; top of east rail.....	543.5
Fowlerville, 1.42 miles north of, remains of old canal lock, west wall, near center of top stone; chiseled square.....	551.92

	Feet.
Fowlerville, in front of station; top of east rail.....	561.2
York, in front of station; top of east rail.....	561.3
York, 1.02 miles south of, east side of track, on coping stone of culvert; chiseled square....	555.76
Piffard, 660 feet north of, west side of track, east side wall of drain from salt works, on coping stone; chiseled square.....	564.96
Piffard, in front of station; top of east rail.....	569.0
Piffard, 1.91 miles south of, east side of track, southeast corner of large culvert wall, on coping stone; chiseled square.....	566.58
Cuylerville, in front of station; top of east rail.....	569.9
Cuylerville, 0.53 mile south of, northwest corner of Bridge No. 5, on northwest corner of parapet wall; chiseled square.....	569.29
Delaware, Lackawanna and Western Junction, grade crossing; top of east rail.....	586.8

NUNDA QUADRANGLE.

Mount Morris, 2,200 feet east of Delaware, Lackawanna and Western station, at northwest corner of railroad bridge, on coping stone; aluminum tablet stamped "575 ROCHESTER 1901".....	574.084
Mount Morris, 0.52 mile north of Erie Railroad station, grade crossing of Delaware, Lackawanna and Western; top of rail.....	574.2
Mount Morris, in front of Erie station; top of west rail.....	597.4
Mount Morris, 0.48 mile south of Erie Railroad station, southeast corner of Pennsylvania railroad bridge, near northeast corner of parapet wall; chiseled square.....	603.72
Sonyea, 0.3 mile north of, southwest corner of girder bridge over highway, top of parapet wall; chiseled square.....	611.56
Sonyea, in front of station; top of east rail.....	623.5
Sonyea, 0.54 mile south of, center of Bridge No. 12 over Keshagua Creek; top of east rail....	630.6
Sonyea, 2.38 miles south of, southeast corner of Bridge No. 13, near northeast corner of parapet wall; chiseled square.....	707.58
Tuscarora, 0.61 mile north of, southeast corner of Bridge No. 15, northeast corner of parapet wall; chiseled square.....	748.82
Tuscarora, in front of station; top of east rail.....	767.1
Tuscarora, 1,100 feet south of, southeast corner of bridge, top of parapet wall; bronze tablet marked "773 ROCHESTER 1902".....	773.302
Nunda Junction, in front of station; top of east rail, Swains branch.....	868.7
Nunda, in front of station; top of west rail.....	941.0
Nunda, Fireman's Hall, front face, 1 foot from northwest corner, in water table; aluminum tablet stamped "944 ROCHESTER 1902".....	944.345

LINE CONTINUED ALONG THE PITTSBURG, SHAWMUT AND NORTHERN RAILROAD.

Nunda, 4.27 miles southeast of, 60 feet south of crossing, west side of track, on coping stone of box drain; chiseled square.....	1,253.96
Ross crossing, 1.40 miles northwest of, small wooden bridge near farm crossing; top of east rail.....	1,290.5

LINE CONTINUED ALONG ERIE RAILROAD.

Ross crossing, 200 feet southeast of, between tracks, north side of open culvert, on coping stone; chiseled square.....	1,317.95
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CANASERAGA QUADRANGLE.

Swains, 1.7 miles north of, southeast corner of steel-girder bridge over small stream, on parapet wall; chiseled square.....	1,305.38
Swains, north of the Pittsburg, Shawmut and Northern Railroad station, near southwest corner of highway bridge, south of railroad, in west wing wall, on large flat stone; chiseled square.....	1,298.58
Swains, 200 feet south of Erie railroad station, small Union Church, northwest corner of, in foundation wall; aluminum tablet stamped "1316 ROCHESTER 1902".....	1,316.658
Swains, in front of Erie station; top of north rail.....	1,307.5
Swains, 0.4 mile southeast of, northwest corner of Bridge No. 9, on coping stone of foundation; chiseled square.....	1,297.10
Swains, 1.79 miles southeast of, northeast corner of Bridge No. 8, on parapet wall; chiseled square.....	1,275.69
Garwood, in front of station; top of south rail, north-bound track.....	1,274.9
Canaseraga, 0.2 mile northwest of, northeast corner of Bridge No. 6½, on foundation stone; chiseled square.....	1,260.33

	Feet.
Canaseraga, in front of station, west-bound track; top of south rail.....	1,257.0
Canaseraga, Kingston Hotel, southwest corner, in water table; aluminum tablet stamped "1253 ROCHESTER 1902".....	1,252.973

HORNELLSVILLE QUADRANGLE.

Burns, in front of station; top of northeast rail.....	1,196.2
Burns, 0.4 mile southeast of, north side of track, on east wall of open culvert; chiseled square.....	1,190.10
Arkport, in front of station; top of north rail.....	1,191.9
Arkport, Methodist Protestant Church, southeast corner, in foundation stone; aluminum tablet stamped "1188 ROCHESTER 1902".....	1,188.284
Arkport, 1.91 miles south of, southeast corner of Bridge No. 4, on wing wall; chiseled square.....	1,169.0
Hornellsville, 0.66 mile north of station, southeast corner of Bridge No. 1, on foundation stone; chiseled square.....	1,169.04
Hornellsville, 0.7 mile east of station, northeast corner of railroad bridge, on foundation wall; aluminum tablet stamped "1141 D".....	1,142.481

CATTARAUGUS COUNTY.

REDHOUSE AND SALAMANCA QUADRANGLES.

The elevations in the following list are the New York portion of the result of two independent double-simultaneous lines of precise leveling run in opposite directions between Salamanca, N. Y., and Irvineton, Pa.

The total divergence between the two lines was 0.043 foot, and the divergence in the rerun line of 1902 alone was 0.011 foot. The total correction to the mean line by the latest adjustment is 0.128 foot in the total distance of 48.8 miles, increasing the elevation at Irvineton with respect to Salamanca, the correction to the 1902 line alone being 0.085 foot. A Buff & Berger precise level was employed in each case, though with an 8-second vial in first line and a 4-second vial in later line. The leveling on the forward line was done in 1899 by Mr. E. L. McNair, topographer, and on the backward line in 1902 by Mr. D. H. Baldwin, topographer. The standard bench marks are referred to the Dunkirk datum and are stamped with the letters "DUNKIRK" in addition to the figures of elevation and year 1899.

SALAMANCA, SOUTHWEST ALONG THE PENNSYLVANIA RAILROAD, TO STATE LINE.

SALAMANCA QUADRANGLE.

	Feet.
Salamanca, Union High School building, Maple street, at right of entrance, in water table; aluminum tablet stamped "1391 DUNKIRK 1899".....	1,391.485

REDHOUSE QUADRANGLE.

Shongo, in front of station; top of north rail.....	1,372.0
Redhouse, in front of station, main track; top of south rail.....	1,345.9
Redhouse, 0.56 mile southwest of, southeast corner of Bridge No. 126, on foundation coping stone; aluminum tablet stamped "1340 DUNKIRK 1899".....	1,340.904
Cold Spring, in front of signboard; top of south rail.....	1,327.5
Quaker Bridge, in front of station; top of rail.....	1,329.4
Quaker Bridge, 1.03 miles southwest of, northeast corner of steel-truss bridge, on foundation coping stone; aluminum tablet stamped "1316 DUNKIRK 1899".....	1,317.298
Wolf Run, in front of station; top of south rail.....	1,328.9
Wolf Run, 0.10 mile west of, southeast corner of Bridge No. 121, on parapet of coping stone; chiseled square.....	1,327.018
Onoville, in front of station; top of west rail.....	1,306.6
State line, opposite boundary post; top of east rail.....	1,295.2

CHAUTAUQUA AND ERIE COUNTIES.

BUFFALO, DUNKIRK, EDEN, AND SILVER CREEK QUADRANGLES.

The elevations in the following list are the result of a line of precise levels connecting army engineers' bench marks at Buffalo and Dunkirk which were formerly established from lake gaging. This line is an element in the precise-level net and became a factor in the adjustment made by the United States Coast and Geodetic Survey in the spring of 1903. In accord with this adjustment a correction of 0.217 foot has been distributed proportional to the distance throughout this line to the unadjusted results, raising the elevation at Dunkirk 0.217 foot with respect to Buffalo. The unadjusted results close low 0.034 foot at Dunkirk upon the latest unadjusted water levels from figures in part given by the War Department corrected to a common elevation at Buffalo. The water-level connection was derived by comparisons made between Buffalo and Erie and between Erie and Dunkirk. The elevation at Dunkirk, upon the old army engineers' datum, was obtained from a local office several years ago and no new records were obtainable, but the relative heights of the Buffalo and Erie bench marks have been more correctly determined by addition of later gage records.

The water leveling to the Dunkirk bench mark has not entered as a factor in the adjustment, since its weight was in doubt; there has thus been 0.184 foot correction made to the water leveling between Buffalo and Dunkirk by the adjustment.

The double-simultaneous method was employed with a Buff & Berger precise level and a 4-second vial. The total length of this double-rodged line is 40.87 miles, and the total divergence, 0.101 foot. The leveling was done during part of July and August, 1902, by Mr. D. H. Baldwin, topographer in charge. All standard bench marks dependent on this datum are stamped with the letters "ROCHESTER" in addition to the figures of elevation and year.

BUFFALO, ALONG THE LAKE SHORE AND MICHIGAN SOUTHERN RAILWAY, TO DUNKIRK.

BUFFALO QUADRANGLE.

	Feet.
Buffalo (United States Engineers' bench mark and State Canal bench mark No. 553), South United States Pier Light House, upper surface of plinth; east angle stamped by chiseling in stone so as to leave a rounded point.....	590.099
Buffalo, Michigan Street Bridge over Buffalo Creek; surface of floor.....	587.0
Buffalo, Lehigh Valley Railroad bench mark, northwest corner of bridge over Ohio Slip; in top of foundation stone; iron bolt.....	586.228
Buffalo, northwest of New York Central switch tower, 24 feet from old stone milepost, 10 feet west of track; top of rail driven vertically in ground.....	589.591
Buffalo, grade crossing of Erie Railroad, four tracks; top of rail.....	585.4
Buffalo, southeast corner of three-span, iron-truss bridge, overhead crossing of the Delaware, Lackawanna and Western Railroad, on south corner of fourteenth step from top of wing wall about level with track; chiseled square.....	585.66
Buffalo (railroad bench mark), northwest corner two-span, steel-truss Bridge No. 267 over Buffalo River, southwest corner of parapet wall; chiseled circle.....	591.46
West Seneca, 0.58 miles north of, end of trestle and two-span bridge overhead crossing, at north end of stone pier about 4 feet above main track, on coping stone; chiseled square.....	589.16
West Seneca, in front of station; top of rail.....	599.9
West Seneca, 1.04 miles south of (New York Central Railroad bench mark), 20 feet south of survey station 606+50, 400 feet south of switch tower; top of rail driven vertically in ground.....	591.27
Athol Springs, in front of station; top of rail.....	626.0
Athol Springs, 0.76 mile south of, milepost "B 11" north face, 6 feet above ground; chiseled square.....	640.54
Athol Springs, 0.91 mile south of, southeast corner of stone-arch culvert bridge, in south face of coping stone; bronze tablet stamped "631 ROCHESTER 1902".....	631.110
Athol Springs, 1.1 miles south of, road crossing to "Hamburg-on-the-Lake;" top of east rail.....	636.6

EDEN QUADRANGLE.

Athol Springs, 1.79 miles south of, near Hamburg station on Pennsylvania Railroad, road crossing on Lake Shore and Michigan Southern Railway; top of rail.....	651.6
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Feet.

Lake View, 1.99 miles north of, west end of box culvert; northeast corner of coping stone, chiseled square.....	665.55
Lake View, in front of station; top of rail.....	708.8
North Evans, in front of station; top of rail.....	697.5
Derby, 1.29 miles north of, 200 feet east of Lake Shore and Michigan Southern track, southeast corner of highway bridge, crossing Pennsylvania Railroad, in west face of concrete wing wall 2 feet above ground; bronze tablet stamped "724 ROCHESTER 1902".....	723.807
Derby, in front of station; top of rail.....	704.6
Derby, 1.27 miles south of trestle No. 236, southwest corner, near northwest corner of coping stone; chiseled square.....	681.08

SILVER CREEK QUADRANGLE.

Angola, 1.69 miles northeast of, northeast corner of trestle over cattle pass, 1 foot above track, on coping stone of wing wall; chiseled square.....	677.16
Angola, 0.51 mile northeast of, southwest corner of truss and stone-arch Bridge No. 228, near northwest corner of coping stone; chiseled square.....	680.06
Angola, in front of station; top of rail.....	690.0
Farnham, southeast corner of Bridge No. 220, in east face of parapet coping stone; bronze tablet stamped "633 ROCHESTER 1902".....	632.956
Farnham, in front of station; top of rail.....	632.3
Farnham, 1.21 miles southwest of, northeast corner of culvert 218, on coping stone; chiseled square.....	610.15
Irving, in front of station; top of rail.....	601.7
Silver Creek, southeast corner of Bridge No. 207 over Dunkirk street, near east corner of parapet wall; chiseled square.....	622.10
Silver Creek, in front of station; top of rail.....	625.5
Silver Creek, 1.58 miles southwest of, southeast corner of Bridge No. 204 (A52), near southeast corner of parapet stone; chiseled square.....	628.02

DUNKIRK QUADRANGLE.

Waites crossing, nearly opposite flag station; top of east rail.....	625.4
Waites crossing, 0.70 mile south of, southeast corner of cattle pass Bridge No. 195, at east corner of parapet stone; chiseled square.....	624.10
Dunkirk, in front of Lake Shore and Michigan Southern railway station; top of rail.....	598.9
Dunkirk, St. Mary's Home and School, Washington avenue, between Third and Fourth streets, in water table 20 feet from northeast corner; aluminum tablet stamped "598 DUNKIRK 1899".....	598.936

PRIMARY LEVELING.

NASSAU, QUEENS, AND SUFFOLK COUNTIES.

BABYLON, HEMPSTEAD, MORICHES, NEW YORK, NORTHPORT, OYSTER BAY, RIVERHEAD, AND SETAUKET QUADRANGLES.

The elevations in the following list are based upon army engineers' bench mark "+18.0555" cut on the face of the retaining wall of Long Dock, in the military post grounds at Willets Point, and corrected also in agreement with United States Coast and Geodetic Survey elevation at Patchogue.

The elevation of this is accepted as 14.135 feet above mean sea level, as obtained from tidal-gage observations made by the Coast and Geodetic Survey and the Army Engineer Corps at Willets Point. The elevations listed on the Hempstead and Oyster Bay quadrangles are republished for completeness without correction from the Nineteenth Annual Report of the United States Geological Survey, pp. 215-217.

The leveling on the Hempstead and Oyster Bay quadrangles was done in 1897 under the direction of Mr. E. B. Clark, topographer, by Mr. Clark Brown, levelman; that on the Northport and Babylon quadrangles was done in 1901 under the direction of Mr. Glenn S. Smith, topographer, by Mr. C. H. Semper, levelman; that on the Setauket quadrangle was done in 1902 under the direction of Mr. Geo. H. Guerdum, topographer, by Mr. Alfred P. Meade, jr.; and that on the Moriches and Riverhead quadrangles was done in 1903 under the direction of Mr. J. M. Whitman, topographer, by Mr. Geo. Seidel, levelman. All standard bench marks dependent on this datum are stamped with the letters referring to "WILLETS PT." in addition to the figures of elevation.

NEW YORK QUADRANGLE.

WILLETS POINT, SOUTH VIA BAYSIDE TO QUEENS, THENCE EAST TO MINEOLA.

	Feet.
Willets Point, military post grounds, long dock; face of retaining wall under coal shed, marked "+18.0555" with chisel.....	14.135

HEMPSTEAD QUADRANGLE.

Creedmoor schoolhouse, northwest corner of Madison avenue and Pine street, 15 feet from south line of lot and 2 feet from front line; iron post stamped "85 W. P.".....	85.163
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MINEOLA, SOUTHEAST VIA GARDEN CITY AND HEMPSTEAD, TO MERRICK.

Mineola, in coping west end north pier of railroad water tank; bronze tablet stamped "105 W. P.".....	105.291
Merrick, southwest corner of railroad crossing, about 15 feet from center of track, 5 feet west of line of street, 15 feet north of corner of stone; iron post stamped "19 W. P.".....	18.834

MERRICK, WEST VIA FREEPORT TO ROCKVILLE, THENCE NORTH TO MINEOLA.

Rockville Center, northeast corner of Village avenue and Observer street, in stone water table of brick building north of door between pilaster and window; bronze tablet stamped "26 W. P.".....	26.378
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OYSTER BAY QUADRANGLE.

MINEOLA, NORTHEAST VIA JERICHO, TO EAST NORWICH.

Jericho, opposite hotel; top of marble highway monument in triangle of roads.....	194.08
Jericho, Jericho pike at forks of road to Oyster Bay and Syosset, retaining wall east of road, 15 feet from driveway to residence; bronze tablet stamped "218 W. P.".....	218.160

EAST NORWICH, WEST VIA ROSLYN TO BAYSIDE.

Roslyn, west side of south front of upper basin on public fountain; bronze tablet stamped "37 W. P.".....	37.452
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NORTHPORT QUADRANGLE.

JERICHO, NORTHEAST ALONG HIGHWAY AND RAILROAD, TO EAST NORTHPORT.

Syosset, road crossing at station; top of rail.....	205.9
Syosset, 1.9 miles east of, overhead railroad bridge, south end of east abutment; top of bridge seat, chiseled square.....	161.38
Cold Spring, at road crossing at station; top of rail.....	129.8
Huntington, northwest corner of Central Presbyterian Church on Main street, front face; bronze tablet stamped "52 WILLETS PT. 1901".....	52.193

EAST NORTHPORT, SOUTH ALONG HIGHWAY VIA COMMACK, TO BRENTWOOD, THENCE WEST ALONG RAILROAD TO DEERPARK.

East Northport, 0.2 mile south of station, south corner of schoolhouse, front face; bronze tablet stamped "229 WILLETS PT. 1901".....	229.433
Commack, near post-office, northeast angle of crossroads; large flat rock.....	131.57
Brentwood, 200 feet west of station, road crossing; top of rail.....	86.0
Brentwood, southeast corner of Presbyterian Church 500 feet south of station, front face; bronze tablet stamped "87 WILLETS PT. 1901".....	87.401
Edgewood, 100 feet south of station, at road crossing; top of rail.....	77.5
Deerpark, 800 feet south of road crossing, in front face of south corner of church; bronze tablet stamped "72 WILLETS PT. 1901".....	72.071

EAST NORTHPORT, EAST ALONG THE LONG ISLAND RAILROAD, TO KINGS PARK.

East Northport, 2 miles east of, Bread and Cheese Hollow Bridge across ravine, west end; top of rail.....	147.9
Kings Park, road crossing; top of high rail.....	171.8

BABYLON QUADRANGLE.

DEERPARK, SOUTH ALONG HIGHWAY, TO BABYLON.

Babylon, Deerpark avenue crossing; top of rail.....	13.0
Babylon, Methodist Episcopal Church on Deerpark avenue, front face near north end; bronze tablet stamped "17 WILLETS PT. 1901".....	16.677

BABYLON, NORTHWEST ALONG RAILROAD VIA FARMINGDALE, TO JERICHO.

Farmingdale, at main street crossing; top of rail.....	Feet. 71
Farmingdale, front face of Catholic Church on Cherry street, east end; bronze tablet stamped "74 WILLETS PT. 1901".....	73.550

SETAUKET QUADRANGLE.

KINGS PARK, EAST ALONG THE LONG ISLAND RAILROAD TO PORT JEFFERSON, THENCE
ALONG HIGHWAYS SOUTH TO HOLTSVILLE, THENCE WEST TO BRENTWOOD.

Smithtown, southwest wing wall of big railroad bridge, cement pier, west end of bridge; bronze tablet stamped "26 WILLETS".....	25.740
Stony Brook, 300 feet east of station, 30 feet north of track, at foot of triple tree; top of big rock, chiseled square.....	111.26
Setauket, 100 feet west of station, north side of east abutment of railroad bridge; top of first step below coping.....	80.70
Port Jefferson, at east end of station, railroad crossing; top of north rail.....	191.7
Port Jefferson, railroad crossing, 6 feet north of track, west side of highway crossing, 25 feet east of freight station; iron post stamped "192 WILLETS".....	192.078
Selden, northwest corner of Methodist Church, in brick foundation; bronze tablet stamped "108 WILLETS".....	107.61
Ruland Hill, Coast and Geodetic Survey triangulation station, 1.9 miles south of Selden; top of east stone reference post.....	332.86
Holtsville, north face of brick house south of track, 150 feet east of station; bronze tablet stamped "104 WILLETS".....	103.728
Ronkonkoma, east end of station, in grass plot, south of highway, north of track; iron post stamped "108 WILLETS".....	108.300

POINT 1.4 MILES EAST OF BRENTWOOD, NORTH ALONG HIGHWAY, TO SMITHTOWN
BRANCH.

Hauppauge, in front of post-office, road crossing; top of big milestone.....	59.06
Smithtown Branch, railroad crossing, south side of track, east side of highway, west end of station; spike in telegraph pole.....	63.64

PATCHOGUE, NORTH TO HOLTSVILLE.

Patchogue, Coast and Geodetic Survey gage bench mark No. 1, about 80 yards from shore, west of Ocean avenue; 4 spikes in twin cedar tree (elevation given by Coast Survey).....	5.70
Patchogue, railroad freight station, north side of track, in northeast corner of brick wall; aluminum tablet stamped "15 WILLETS PT.".....	15.540

MORICHES QUADRANGLE.

SELDEN, ALONG PUBLIC ROAD EAST VIA MIDDLE ISLAND, TO RIVERHEAD.

Middle Island post-office, 0.4 mile east of; west of Artist Lake, 20 feet south of center of highway, 175 feet west of road to Woodville, in rock; bronze tablet stamped "57 WILLETS PT.".....	57.065
Manorville, 3.5 miles north of, 1.2 miles east of Horn Tavern, south of road, about 800 feet east of Henry Hallock's farmhouse, at road running south; iron post stamped "83 WILLETS PT.".....	83.454

EASTPORT, WEST ALONG THE LONG ISLAND RAILROAD, TO PATCHOGUE.

Center Moriches, pavement, west end of platform; rock.....	29.99
South Haven, Presbyterian Church, northwest corner of foundation wall; bronze tablet stamped "17 WILLETS PT.".....	17.654

RIVERHEAD QUADRANGLE.

RIVERHEAD, SOUTHWEST TO EASTPORT.

Riverhead, northeast corner of court-house, in brick foundation; aluminum tablet stamped "28 WILLETS PT.".....	27.862
Eastport, 225 feet north of railroad station, south side of road to Speonk; iron post stamped "29 WILLETS PT.".....	29.780

ESSEX, FRANKLIN, AND HAMILTON COUNTIES.

LAKE PLACID, SANTANONI, SARANAC, AND ST. REGIS QUADRANGLES.

The elevations in the following list are based upon a bronze tablet in top of south end of east abutment of Grand Trunk Railway bridge over Salmon River, 600 feet west of Fort Covington station, stamped "167 ALBANY 1900." The elevation of this is accepted as 166.453 feet above mean sea level, and is determined from a bench mark of the United States Board of Engineers on Deep Waterways, on the same abutment, the elevation of which is determined to be 1.017 feet lower than given by the Board, in accordance with the 1903 adjustment. For additional elevations on St. Regis quadrangle see list on the precise-level line from Fort Covington to Tupper Lake Junction.

The leveling was done under the direction of Mr. Glenn S. Smith, topographer, as follows: On the Santanoni and Lake Placid and part of Saranac and St. Regis quadrangles in 1901 by Mr. C. H. Semper, levelman; the remainder on St. Regis quadrangle was done in 1902 by Mr. George Seidel; and the remainder on Saranac quadrangle in 1902 by Messrs. Seidel and A. P. Meade, jr., levelmen. All standard bench marks dependent on this datum are stamped "FT. COVINGTON" in addition to the figures of elevation.

SANTANONI QUADRANGLE.

AXTON, VIA AMPERSAND AND PRESTON PONDS, TO AVERYVILLE.

	Feet.
Axton, 6.5 miles east of, 0.7 mile southwest of Ampersand Lake, 450 feet west of old lumber camp, 10 feet south of road, on large rock 20 by 15 feet; bronze tablet stamped "1917 FT. COVINGTON 1901".....	1,917.438
Averyville, 550 feet south of school, 20 feet west of west margin of road, in large boulder 8 feet square; bronze tablet stamped "2069 FT. COVINGTON 1901".....	2,069.446

AVERYVILLE, VIA LAKE PLACID AND ALONG THE CHATEAUGAY RAILROAD, TO LAKE PLACID.

Averyville, 1.9 miles northeast of, iron bridge over river, west side of north abutment, on top of bridge seat; chiseled square.....	1,817.88
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NEWCOMB, NORTH ALONG ROAD TOWARD COLD RIVER (SINGLE SPUR LINE).

Newcomb, 7.3 miles north of, 0.8 mile west of Moose Pond, on road to Cold River at top of hill, 30 feet east of road, on large rock; bronze tablet stamped "1910 FT. COVINGTON 1901".....	1,909.615
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PRESTON PONDS, SOUTH ALONG TRAIL AND PUBLIC ROADS VIA UPPER IRON WORKS, TO TAHAWAS.

[Excessive error distributed in this line.]

Preston Pond, 800 feet south of, on east margin of trail between Preston Pond and Henderson Lake, in face of rock; bronze tablet stamped "2180 FT. COVINGTON 1901".....	2,179.791
Upper Iron Works, opposite Tahawas Club House, 65 feet east of road; on large rock; bronze tablet stamped "1771 FT. COVINGTON 1901".....	1,770.881

LAKE PLACID QUADRANGLE.

Lake Placid, 0.4 mile south of station on road to Averyville, on west margin of road, in large rock; aluminum tablet stamped "1750 FT. COVINGTON 1901".....	1,750.339
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SARANAC QUADRANGLE.

LAKE PLACID, ALONG RAILROAD TO SARANAC LAKE.

Lake Placid, 2.8 miles west of, north end of west abutment of stone culvert; top of bridge seat, chiseled square.....	1,631.88
Lake Placid, 4.5 miles west of, north end of east abutment of stone culvert; top of parapet wall, chiseled square.....	1,570.97
Ames Mills, at road crossing; top of rail.....	1,569
Saranac Lake, Baptist Church, opposite Franklin Hotel, in north face of foundation wall; aluminum tablet stamped "1549 FT. COVINGTON 1901".....	1,548.97

SARANAC LAKE, NORTHWEST ALONG THE NEW YORK CENTRAL RAILROAD VIA LAKE CLEAR, TO SARANAC JUNCTION.

	Feet.
Saranac Lake, in front of New York Central Railroad station; top of rail.....	1,574.0
Lake Clear (Saranac Junction), in front of station; top of rail.....	1,632.7
Lake Clear (Saranac Junction), 800 feet south of station, railroad water tank, on top of south-east foundation stone nearest track; chiseled square.....	1,630.25

SARANAC LAKE, SOUTHWEST ALONG STATE ROAD VIA AMPERSAND HOTEL, TO CLEARING (SINGLE SPUR LINE).

Saranac Lake, 6.4 miles southwest of, on north edge of clearing, on face of large rock; aluminum tablet stamped "1678 FT. COVINGTON 1901".....	1,678.218
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LAKE CLEAR JUNCTION, NORTHEAST ALONG THE NEW YORK CENTRAL AND HUDSON RIVER RAILROAD VIA PAUL SMITH STATION, TO ONCHIOTA.

Lake Clear Junction, west side of railroad, southeast corner of foundation stone of water tower; aluminum tablet stamped "1630 FT. COVINGTON".....	1,630.474
Paul Smith station, road crossing at station; top of rail.....	1,701.2
Paul Smith station, 665 feet west of track, 225 feet north of road to post-office, in boulder; bronze tablet stamped "1704 FT. COVINGTON".....	1,703.800
Rainbow Lake, road crossing at station; top of rail.....	1,708.5
Onchiota, 200 feet south of station, east side of track, in big boulder; aluminum tablet stamped "1710 FT. COVINGTON".....	1,710.514

PAUL SMITH STATION, EAST ALONG PUBLIC ROADS TO BLOOMINGDALE, THENCE NORTH VIA VERMONTVILLE TO ONCHIOTA.

Bloomingsdale station, road crossing; top of rail.....	1,555.8
Bloomingsdale station, iron bridge, 70 feet east of north side of road, in large boulder; aluminum tablet stamped "1530 FT. COVINGTON".....	1,529.666
Vermontville, 5.6 miles north of, road crossing, in large boulder; aluminum tablet stamped "1776 FT. COVINGTON".....	1,776.288

ST. REGIS QUADRANGLE.

SARANAC JUNCTION, SOUTHWEST ALONG THE NEW YORK CENTRAL RAILROAD, TO TUPPER LAKE JUNCTION.

Saranac Inn, in front of station; top of rail.....	1,622.3
Saranac Inn, 1.7 miles west of, 200 feet south of milepost (Herkimer 146), in middle of rock cut; aluminum tablet stamped "1632 FT. COVINGTON 1901".....	1,631.920
Floodwood, at road crossing; top of rail.....	1,594.0

PAUL SMITH STATION, WEST ALONG PUBLIC ROADS VIA PAUL SMITH POST-OFFICE TO BRANDON.

Paul Smith post-office (Corning Point), 900 feet south of store, in boulder; aluminum tablet stamped "1632 FT. COVINGTON".....	1,631.943
Paul Smith post-office, 2.8 miles west of, at powerhouse; northeast corner of concrete dam.....	1,620.77
Brandon, in front of station; top of rail.....	1,603.3

AT WAWBEEK.

Wawbeek, 100 feet west of road corners, at south side of road, in boulder; aluminum tablet stamped "1650 A".....	1,650.771
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ESSEX, HAMILTON, AND WARREN COUNTIES.

BLUE MOUNTAIN, INDIAN LAKE, NEWCOMB, SCHROON LAKE, AND THIRTEENTH LAKE QUADRANGLES.

The elevations in the following list result from a readjustment of leveling previously reported upon in the Appendixes to the Eighteenth, Twentieth, and Twenty-first Annual Reports. The nearest precise-level elevation is at North Creek.

The leveling on most of Indian Lake and Thirteenth Lake quadrangles was done in 1896 under the direction of Mr. W. H. Lovell, topographer, by Mr. Clark Brown, levelman; the remainder on these and on the other quadrangles was done in 1896 under the direction of Mr. W. M. Beaman, topographer, by Mr. A. F. Krause, levelman, except on line to establish

bench mark southwest of Grove, which was done in 1899 under Mr. A. M. Walker, topographer, by Mr. W. W. Gilbert, levelman. The standard bench marks, except one south of Grove House, were set in 1896; and are stamped with figures mostly 4 feet too great, the original starting elevation having been that much in error.

INDIAN LAKE QUADRANGLE.

Wakely dam, 25 feet east of north of log house; in boulder copper bolt stamped "2124"..... 2,119.764

SPECULATOR, NORTH VIA JESSUPS RIVER AND LEWEY LAKE, TO INDIAN LAKE.

Speculator, small triangular park at crossroads, in boulder; copper bolt stamped "U. S. G. S. 1772 Ft. B. M."..... 1,768.369
Camp Perkins, 0.5 mile east of, 50 feet west of Jessups River Bridge, on north bank of river, in outcrop 5 feet above center of bridge; copper bolt stamped "U. S. G. S. 1689 Ft."..... 1,685.012
Lewey Lake, 100 feet from south shore of, 300 feet north of Lewey Lake House in boulder 8 feet broad; copper bolt stamped "U. S. G. S. 1659 Ft. B. M."..... 1,654.964
Sabael, 3 miles southwest of, 900 feet southwest of Beaver Brook Bridge, outcrop 3 feet above and 20 feet north of road; copper bolt stamped "1799 Ft. U. S. G. S. B. M."..... 1,795.112

KINGS FLOW DAM, SOUTHWEST VIA CAMP COMFORT, TO SPECULATOR.

Camp Comfort (Ross Kunjamuk House), 2,000 feet south of, 8 feet east of road, in boulder 6 by 4 by 2 feet; copper bolt stamped "1774 Ft."..... 1,770.375
Speculator, 3 miles northeast of, at Rylander Clearing, west of Elm Lake, 300 feet south of house foundation, 1,000 feet north of top of hill, in flat outcrop 6 feet west of road; copper bolt stamped "U. S. G. S. B. M. 1952 Ft."..... 1,947.992

THIRTEENTH LAKE QUADRANGLE.

NORTH CREEK, NORTHWEST TO NORTH RIVER.

North River, 40 feet west of northwest corner of Thirteenth Creek Bridge, 30 feet east of corner of house; copper bolt stamped "U. S. G. S. 1076"..... 1,072.257
North River, 300 feet west of bridge at; top of copper bolt of Adirondack Survey triangulation station No. 118, 1882 (same to mark Warren-Essex County line)..... 1,080.929

NORTH CREEK, SOUTHWEST VIA SODOM AND BAKERS MILLS, TO MOUNTAIN HOUSE.

Bakers Mill Pond, under southwest corner of bridge over North Creek; southwest edge of casting..... 1,016.86
Bakers Mills, 50 feet north of blacksmith shop and 25 feet west of road, in boulder 6 feet broad and 2 feet above ground; copper bolt stamped "U. S. G. S. B. M. 1585 Ft."..... 1,581.042

GRIFFIN TO MOUNTAIN HOUSE.

Oregon, 2.5 miles southwest of, 300 feet northeast of Stuarts Creek and east of Sacandaga River, point 5 feet west of road on outcrop; copper bolt stamped "U. S. G. S. 1377 Ft. B. M."..... 1,373.140
Oregon, 1,000 feet northeast of the North House (McKlosky's) and 150 feet north of curve to right in road, boulder 5 by 10 feet to right of road; copper bolt stamped "U. S. G. S. B. M. 1435 Ft."..... 1,431.005

MOUNTAIN HOUSE, NORTHWEST VIA THIRTEENTH LAKE AND KINGS FLOW DAM, TO INDIAN LAKE.

Big Shanty dam, 200 feet southeast from east end of, in boulder 3 feet high and 8 feet broad; copper bolt stamped "U. S. G. S. 1666 Ft. B. M."..... 1,662.383
Thirteenth Lake House, 75 feet in front of, in low flat outcrop; copper bolt stamped "U. S. G. S. 1874 Ft. B. M."..... 1,869.761
Kings-Flow dam, 500 feet northwest of bridge at, 10 feet to right of and 1 foot above road; copper bolt stamped "U. S. G. S. 1724 Ft. B. M."..... 1,720.016

SCHROON LAKE QUADRANGLE.

NORTH CREEK, NORTH VIA MINERVA, TO AIDEN LAIR.

Minerva, in north end of picket fence southeast of Kellogg House, in large boulder 15 feet to right and 1.5 feet above road; copper bolt stamped "U. S. G. S. 1393 Ft. B. M."..... 1,389.009
Minerva, 1.75 miles north of, 80 feet east of Kellogg House at junction of road to North Woods Club, south of schoolhouse, 26 feet to right of and 7.3 feet above center of road, in outcrop; copper bolt stamped "U. S. G. S. 1742 Ft. B. M."..... 1,737.854

NEWCOMB QUADRANGLE.

Feet.

Aiden Lair lodge, 50 feet southeast of, in boulder; copper bolt stamped "U. S. G. S. 1659 Ft. B. M."..... 1,655.022

NORTH RIVER, NORTHWEST VIA SUMMIT, TO INDIAN LAKE.

Indian Lake, 4 miles east of, southeast of Spring's white house, in front of log house 10 feet to left of road; copper bolt stamped "U. S. G. S. B. M. 1834 Ft."..... 1,830.049

AIDEN LAIR, NORTH TO TAHAWUS, THENCE WEST TO NEWCOMB.

Tahawus, 2 miles south of, 0.6 mile northwest of Daniel Havron's house, in large boulder 12 feet to left of road; copper bolt stamped "U. S. G. S. 1737 Ft. B. M."..... 1,732.862
Hudson River Bridge, on top of coping at downstream end of west abutment; chiseled mark. 1,563.41
Newcomb Methodist Church, 85 feet northeast of door, 16 feet to left and 1.3 feet above center of road; copper bolt stamped "U. S. G. S. 1640 Ft. B. M."..... 1,637.051

NEWCOMB, WEST TO HAMILTON-ESSEX COUNTY LINE.

Rich Lake, south side of, 460 feet back from Abner Beldin's house, on large boulder, 14 feet to right of and 3.8 feet above center of road; copper bolt stamped "U. S. G. S. 1603 Ft. B. M."..... 1,599.473

INDIAN RIVER, NORTHEAST DOWN SAME, FROM BRIDGE EAST OF INDIAN LAKE VILLAGE, TO MOUTH.

Indian River Bridge, west abutment, near front angle of coping on upstream end; chiseled square..... 1,597.78
Hudson River, southwest bank, junction with north bank of Indian River; circular chisel mark and letter "S" on large boulder..... 1,424.32

MOUTH OF INDIAN RIVER, NORTHEAST VIA NORTH WOODS CLUB AND MOOSE POND CLUB, TO AIDEN LAIR.

Hudson River, junction of southwest bank with northwest bank of Indian River, in recess at upper southwest corner of boulder; copper bolt stamped "U. S. G. S. 1428 Ft. B. M." 1,423.897
North Woods Club House, boulder 200 feet northeast of; copper bolt stamped "U. S. G. S. 1769 Ft. B. M."..... 1,764.825
Moose Pond Club House, 100 feet northwest of; in large boulder near shore; copper bolt stamped "U. S. G. S. 2095 Ft. B. M."..... 2,091.399

MOUTH OF INDIAN RIVER, NORTHWEST TO CHAIN LAKES.

Cedar River, south bank of, 2 miles west of Hudson River, 20 feet southwest of ferry on road to Chain Lakes, in outcrop; copper bolt stamped "U. S. G. S. 1549 Ft. B. M."..... 1,544.603
Chain Lakes, 50 feet south of third lake, 12 feet above water surface in outcrop, 1,100 feet northwest of hotel; copper bolt stamped "1615"..... 1,610.793

BLUE MOUNTAIN QUADRANGLE.

Indian Lake Village, 0.7 mile south of, west end of smooth sloping outcrop 75 feet in length, 10 feet from road, 20 feet east of elm tree 8 inches in diameter; copper bolt stamped "U. S. G. S. 1793 Ft. B. M."..... 1,788.807

CEDAR RIVER HOUSE, SOUTHWEST TO WAKELY DAM.

Wakely dam, 4.8 miles north of, 0.7 mile southwest of Browns House, 20 feet north of bridge over small stream flowing east into Cedar River, 15 feet to right of road; copper bolt stamped "U. S. G. S. B. M. 1,918"..... 1,913.585

CEDAR RIVER HOUSE, NORTHWEST TO BLUE MOUNTAIN LAKE.

Forest House, 25 feet of north of west of northwest corner of barroom, in outcrop; copper bolt stamped "U. S. G. S. 1941 Ft. B. M."..... 1,937.247
Blue Mountain Lake, 3 miles southeast of, bridge over Rock River, on downstream end of easterly abutment; chiseled square..... 1,774.56

BLUE MOUNTAIN LAKE, NORTH TO LONG LAKE.

Blue Mountain Lake, foundation of schoolhouse, in second stone from southwest corner of second course from top; bronze tablet stamped "1810"..... 1,805.700
Long Lake, 5.5 miles south of, east side of South Pond, 12 feet to left and 2.5 feet above center of road, in boulder; copper bolt stamped "U. S. G. S. 1855 Ft. B. M."..... 1,851.176

	Feet.
Long Lake, 260 feet west of Sabattis's two-story frame house, in west end of outcrop, 130 feet to left of center of road; copper bolt stamped "U. S. G. S. 1663 Ft. B. M.".....	1,658.685
Long Lake, front line of Lake House, 35 feet south of house, on bowlder; chiseled mark ("Colvin's B. M. 71 A").....	1,636.64
Long Lake, 2.75 miles southwest from Grove House; 130 feet east of fork in State road to Forked Lake, 50 feet south of road, north face of large bowlder; aluminum tablet stamped "1726 ALBANY".....	1,726.514

LONG LAKE, EAST TO ESSEX-HAMILTON COUNTY LINE.

Long Lake, 4 miles east of, 35 feet west of 4-mile post, in outcrop 14 feet to right and 2.5 feet above center of road; copper bolt stamped "U. S. G. S. 1863 Ft. B. M.".....	1,858.465
Essex-Hamilton County line, 0.87 mile west of, south side of Fishing Brook, in bowlder 12 feet to left of and 3.5 feet above center of road; copper plug stamped "U. S. G. S. 1698 Ft. B. M.".....	1,694.227

HAMILTON, HERKIMER, AND ONEIDA COUNTIES.

LITTLE FALLS, MCKEEVER, OLD FORGE, REMSEN, UTICA, WEST CANADA LAKES, AND WILMURT QUADRANGLES.

The elevations in the following list result from a readjustment of leveling reported upon in the Appendixes to the Eighteenth, Nineteenth, and Twentieth Annual Reports of the Director of the United States Geological Survey, with a few additions.

The leveling was done as follows: On Utica quadrangle, under Mr. J. H. Jennings, topographer, in 1896, by Mr. A. B. Pomme. On Little Falls quadrangle, under Mr. C. C. Bassett, topographer, in 1898, by Mr. Clark Brown, levelman; under Mr. A. M. Walker, topographer, in 1898, by Messrs. E. L. Faison and M. S. McDiarmid, levelmen; and under Mr. Jennings, in 1896, by Mr. A. B. Pomme. On Remsen quadrangle, under Mr. W. H. Lovell, topographer, in 1897, by Mr. E. L. McNair, levelman; under Mr. Jennings, in 1897, by Mr. Brown and also under Mr. Bassett by Mr. L. T. Haney, levelman. On Wilmurt quadrangle, under Mr. Lovell, in 1897, by Mr. McNair; and under Mr. Walker, in 1898, by Mr. McDiarmid. On McKeever and Old Forge quadrangles under Mr. Jennings, in 1897, by Mr. Brown, and under Mr. Walker, in 1898, by Mr. C. H. Semper, levelman. On West Canada Lakes quadrangle, under Mr. Walker, in 1898, by Messrs. Semper and McDiarmid. The standard bench marks are stamped variously "R," "A," and "ALBANY," and also without datum letters, and with figures of elevation mostly correct except those set in 1896, which are usually 2 feet too great.

UTICA QUADRANGLE.

	Feet.
Utica, rear of post-office building, west of east basement door; bronze tablet stamped "419".....	417.207
Utica, Turner street, Herkimer-Oneida County line, on fence line between the New York Central and Hudson River Railroad and trolley tracks; bronze meridian tablet.....	466.329
Utica, Albany street, Starch Factory Creek, stone-arch bridge, north abutment, west wing; northeast corner of top step.....	522.90
Utica, the Delaware, Lackawanna and Western and the Rome, Watertown and Ogdensburg railroads; northwest corner of foundation of northwest pier (New York Central and Hudson River Railroad bench mark).....	408.79

STEWARTS CORNERS, VIA MOYER CREEK, TO FRANKFORT.

Rushmer road, first barn east of Stewarts Corners, between third and fourth telegraph poles Nos. 9588 and 9587 east of barn, on bowlder half in road and half in field; copper bolt stamped "U. S. G. S. 1380 feet B. M.".....	1,378.477
Lock No. 45, canal engineer bench-mark No. 204, at coping at end of northeast gate; towpath lock, stamped "Ⓟ".....	427.326

SAUQUOIT, EAST ALONG HIGHWAY, TO NORWICH CORNERS.

Norwich Corners, south face near east end of residence of H. A. Smith, in foundation wall; aluminum tablet stamped "1318 ADJ 1903".....	1,318.155
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UTICA, NORTH VIA TRENTON PLANK ROAD, TO SOUTH TRENTON.

Deerfield, J. A. Auert's brick building, middle door; north corner of stone doorsill.....	427.68
Salem Welsh Church, Trenton plank road, 600 feet west from plank road, on foundation stone at southeast corner; chisel mark.....	815.70

	Feet.
Ninemile Creek Bridge, Trenton plank road, on west bridge seat, north abutment; chiseled square.....	755.82
'South Trenton, north side of road opposite west gate of cemetery, on bowlder; copper bolt stamped "U. S. G. S. B. M. 806 Ft.".....	803.938

SOUTH TRENTON, EAST VIA NORTH GAGE, TO POLAND, THENCE SOUTHEAST TO NEWPORT.

North Gage Church, on southeast corner of stone step; chiseled square.....	986.00
Poland, Main street, center of stone arch over Cold Brook, on west coping; chiseled square..	720.38
Poland, first iron bridge over Cold Brook northeast of village, in foundation stone, east abutment, north wing; copper bolt stamped "U. S. G. S. B. M. 800 Ft.".....	798.841
Poland, 0.5 mile south of, north wing of iron highway bridge over West Canada Creek, on east abutment bridge seat; chiseled square.....	690.86
Newport, stone bridge over West Canada Creek, in north coping over center pier, 6 inches south of square chisel mark and flush with coping; copper bolt stamped "U. S. G. S. 658 Ft. B. M.".....	656.450
Ilion, Steel Creek Aqueduct, Erie Canal, in center of third coping stone from west end, parapet wall, towpath side; copper bolt stamped "U. S. G. S. B. M. 410 Ft." (0.027 foot higher than State engineer's B. M. No. 197).....	408.574

FRANKFORT, TO POINT 5.6 MILES NORTH OF FRANKFORT, IN TOWN OF SCHUYLER.

West Shore Railroad crossing: top of south rail.....	400.4
Frankfort station, Mohawk River Bridge, near north abutment, east wing, on bridge seat; chiseled square.....	398.57
Frankfort, near station, New York Central Railroad crossing; top of south rail.....	400.00
Frankfort, 5.6 miles north of, at southwest corner of road crossing; iron post stamped "U. S. G. S. B. M. 580 Ft.".....	577.793

LITTLE FALLS QUADRANGLE.

LITTLE FALLS, EAST TO INGHAMS MILLS, THENCE NORTH TO SALISBURY CENTER.

Little Falls, engineer's bench mark at Lock No. 36, Erie Canal.....	343.487
Little Falls, southeast corner of Ann and Albany streets, northwest corner of brick building with stone foundation; aluminum tablet stamped "397".....	397.118
Little Falls, 2 miles east of, Erie Canal Lock No. 37, northeast corner; top of coping stone, chiseled cross.....	353.535
Manheim, in front of station; top of south rail.....	604.5
Inghams Mills, 27 feet east of Little Falls and Dolgeville Railroad track, 120 feet north of road crossing, on rock in place 6 feet above ground; aluminum tablet stamped "726 A".....	726.870

SALISBURY CENTER, WEST VIA FAIRFIELD, TO MIDDLEVILLE.

Salisbury Center, brickwork in rear of Universalist Church; aluminum tablet stamped "1065 A".....	1,064.372
Salisbury Corners, church near northeast corner of crossroads, stone entrance, lower step, south end of face corner; chiseled square.....	1,214.22
Fairfield, Military Academy laboratory building, front of south end, in stonework 3 feet above ground; aluminum tablet stamped "1278 A".....	1,277.867
Fairfield, Military Academy laboratory building, front of south end, projection on corner stone 1 foot above ground; old bench mark marked "1276.829 above tide at Troy".....	1,276.240

MIDDLEVILLE, NORTH TO NORWAY, THENCE EAST AND SOUTH TO SALISBURY CENTER.

Middleville, 3.5 miles north of, 200 feet north of road to east by stone schoolhouse, east end of stone culvert; chiseled square.....	777.00
Norway, northwest corner of crossroads opposite hotel, west end of stone foundation of building, 1 foot from face corner; aluminum tablet stamped "1320 A".....	1,319.830
Salisbury Center, 5.5 miles north of, 80 feet north of Jerseyfield Lake road, in outcrop 1 foot from southeast corner of Willis Nichols's barn; aluminum tablet stamped "1618 A".....	1,618.535
Salisbury, 2.3 miles north of, at Curtis schoolhouse, east and west road crossing; stone step marked with circle.....	1,426.08

NEWPORT, ALONG THE NEW YORK CENTRAL AND HUDSON RIVER RAILROAD SOUTH-EAST, TO MIDDLEVILLE, THENCE SOUTH TO HERKIMER.

White Creek, iron bridge, on south abutment of bridge seat, east wing; chiseled square.....	632.77
City Brook, on south end of east parapet wall of stone arch, on coping stone; chisel mark..	609.03
Canyon Brook, stone arch over, south end of east parapet wall, on coping stone; chiseled square.....	591.26

	Feet.
Middleville, West Canada Creek; north coping of west abutment of iron highway bridge, marked "O".....	572.35
Middleville, West Canada Creek, in coping of iron bridge, west abutment, north wing; copper bolt stamped "U. S. G. S. B. M. 572".....	570.861
Herkimer County poorhouse, in north corner of bottom of flagstone, front entrance; chiseled square.....	591.21
Countryman station, Atlantic and St. Lawrence (Grand Trunk) Railroad, Bridge No. 10, north abutment, west wing wall, close to angle, on coping stone; chiseled square.....	492.31
West Canada Creek, Dempsters Bridge, 0.5 mile north of Kasts Bridge, north abutment, west wing; bridge seat marked "O. B. M.".....	473.80
West Canada Creek, Kast Bridge (railroad station), west abutment, north wing; bridge seat stamped "O. B. M.".....	457.51
Herkimer waterworks, north door of pump house; northwest corner of doorstep, stamped "O. B. M. 5".....	402.03
Herkimer, county clerk's office on Court street, left of main entrance, in stone water table; aluminum tablet stamped "407 A".....	406.975

REMSEN QUADRANGLE.

SOUTH TRENTON, VIA PROSPECT, HINCKLEY, AND NORTHWOOD, TO NEAR WILMURT.

Trenton, Rome, Watertown and Ogdensburg Railroad station, south door of waiting room, 0.42 foot west of door jamb; water table.....	840.65
Prospect station, Rome, Watertown and Ogdensburg Railroad crossing over highway just north of, on lower step of south abutment, east side; chiseled square.....	984.93
Prospect post-office, 0.22 mile north of, in field opposite creamery and east of road, in boulder 3 by 7 by 12 feet; copper bolt stamped "1142 R".....	1,141.105
Hinckley, 0.25 mile west of Empire Hotel, stone culvert north side of road, on east end of wall; chiseled square.....	1,181.05
Hinckley, 2.3 miles northeast of, and about 1.1 miles west of Oneida-Herkimer County line, in Remsen Township, 55 feet from road center, in pasture, west side of road, in boulder; copper bolt stamped "1262 R".....	1,261.647
Northwood, on stone abutment at northwest corner of iron bridge over stream at sawmill; chiseled square.....	1,207.49
Northwood, 2.8 miles east of, 3,450 feet west of abandoned house south of road, 7 feet north of center of road, on large boulder; copper bolt stamped "1258 R".....	1,257.696

OHIO, SOUTH TO POLAND.

Ohio, 2.6 miles southwest of, on stone foundation at northeast corner of iron bridge over Black Creek; chiseled square.....	1,236.15
Cold Brook, 3.4 miles north of, 3.6 miles south of Ohio, 480 feet south of road from southwest and 1 mile south of crossing of Black Creek, in Prussian Township, on west side of road, 3 feet from wire fence; copper bolt stamped "1265 R".....	1,264.710

PROSPECT, NORTH ALONG THE NEW YORK CENTRAL AND HUDSON RIVER RAILROAD, TO FORESTPORT.

Prospect, 1,000 feet northeast of station, on Hinckley Branch Railway, on parapet north side of culvert, on northwest corner of coping; chisel mark "O. B. M. 55".....	1,146.83
Remsen, north end of retaining wall between lower milldam and Rome, Watertown and Ogdensburg Railroad, in end of coping near face corner; bronze tablet stamped "1172".....	1,171.464
Honnedaga station, 0.25 mile north of, 40 feet west of track, opposite cattle guard, in boulder 6 by 15 feet; copper bolt stamped "U. S. G. S. 1209 R".....	1,208.354
Forestport station, 2 miles south of, north end of Black River (reservoir) Bridge, on west end of coping of parapet; chiseled square.....	1,178.95
Forestport, 0.3 mile north of station, at Meekville, north end of railroad bridge over Little Woodhull Creek, west end of parapet coping; copper bolt stamped "U. S. G. S. R 1199 Ft. B. M.".....	1,199.054

FORESTPORT, ALONG ROAD EAST TO ENOS, THENCE NORTHEAST TO ATWELL.

Enos, 0.7 mile southeast of, Oneida-Herkimer County line, at forks of roads to northeast and to Maple Lake; top of stone.....	1,387.80
Maple Lake; outlet of, 1.0 mile southeast of Enos, west abutment of bridge; copper bolt stamped "1318 U".....	1,317.970
Reeds Mill, east side of south abutment of bridge over Black River; copper bolt stamped "1508 R".....	1,597.267

WILMURT QUADRANGLE.

HUBBARD HOTEL, SOUTH TO OHIO.

Feet.

Wilmurt, 3 miles west of, 0.18 mile east of Hubbard Hotel, 60 feet south of road, 25 feet east of fence, in meadow; chiseled point on painted boulder marked "E" (State bench mark). 1,276.32
 Ohio, 750 feet west of corner near church, 1,200 feet east of schoolhouse and 80 feet north of road, in field belonging to G. Johnson; copper bolt stamped "1374 R"..... 1,373.809

FROM NEAR WILMURT, NORTHEAST VIA NOBLEBORO, TO HONNEDAGA LAKE.

Wilmurt, 0.7 mile west of, 165 feet east of Henry Paull's Hotel, in pasture, 70 feet south of center of road; bronze tablet stamped "1402 Ft. R"..... 1,401.249
 Nobleboro, 225 feet east of hotel, 4 feet from fence on north side of road, on small boulder; chiseled square..... 1,418.71
 Nobleboro, 2.4 miles north of, 225 feet west of Haskell Hotel, 8 feet south of center of road, on large boulder; chiseled point (State bench mark No. 9)..... 1,574.23

SALISBURY CENTER, NORTH ALONG ROAD, TO MOREHOUSEVILLE.

[The error distributed in this line is excessive.]

Jerseyfield Lake, 200 feet west of outlet, 100 feet south of lake, in yard of Mrs. Williams's tenant house, on large boulder; tablet stamped "1941 A"..... 1,941.916

NOBLEBORO TO MOREHOUSEVILLE.

Morehouseville, 940 feet east of road south from post-office, 425 feet east of schoolhouse, 15 feet south of center of road to Piseco Lake, in flat ledge; copper bolt stamped "1909 Ft. B. M." 1,910.160

M'KEEVER QUADRANGLE.

FORESTPORT, NORTH TO WHITE LAKE.

White Lake station, 2 miles south of, near Nicholl's mills, on face of coping, at northwest corner of Bear Creek railroad bridge; chiseled square..... 1,370.08

WHITE LAKE, NORTHEAST ALONG THE NEW YORK CENTRAL AND HUDSON RIVER RAILROAD VIA M'KEEVER, TO FULTON CHAIN.

White Lake station, 50 feet west of railroad, 10 feet north of wagon road, in boulder 5 feet broad; copper bolt stamped "1421 A"..... 1,420.664
 White Lake station, 2.5 miles north of, 100 feet north of White Lake Granite Company's switch, west of track at foot of embankment; iron staple in boulder 20 feet broad..... 1,456.819
 McKeever, 600 feet south of station, west of track, in rock in cut; copper-bolt stamped "U. S. G. S. 1544 Ft. B. M."..... 1,543.828
 McKeever, 2 miles north of, iron railway bridge No. 6 (20-foot span), northwest wing, near face corner end of coping; chiseled square..... 1,559.12
 McKeever, 3.5 miles north of at railroad bridge No. 37 (90-foot span) over Moose River, 1 foot from girder, north abutment, west end on face angle; chiseled square..... 1,641.34
 Minnehaha station, Moose River Bridge, north end, east end of parapet, on face corner; chiseled square..... 1,681.39
 Fulton Chain station, 3 miles southwest of, 500 feet north of house, south end of culvert, on north end of parapet; chiseled square..... 1,714.28

WHITE LAKE, EAST TO NORTH LAKE (ATWELL POST-OFFICE).

North Lake (Atwell), 6.3 miles northwest of, at junction of road to Woodhull Lake; aluminum tablet in top of rock stamped "1947 A"..... 1,947.329
 Woodhull, in front of State House, in line with back edge of dam; $\frac{1}{2}$ -inch copper bolt..... 1,883.072

OLD FORGE QUADRANGLE.

FULTON CHAIN, NORTHEAST ALONG ROAD VIA OLD FORGE AND NORTH SIDE OF FULTON CHAIN LAKES, TO EAGLE BAY.

Fulton Chain, 5 feet north of Wakeley's Hotel, 8 feet east of railroad track, in boulder; bronze tablet stamped "R 1712"..... 1,711.854
 Old Forge, 0.25 mile west of railroad station, at picnic ground, in boulder 7 by 12 by 15 feet, north of railroad track; bronze tablet stamped "R 1733"..... 1,732.515
 Third Lake, Fulton Chain, at Bald Mountain House, 40 feet east of dock, 8 feet from north shore of lake; iron post stamped "R 1712"..... 1,712.164

SIXTH LAKE, SOUTHEAST TO FAWN LAKE.

	Feet.
Sixth Lake, Fulton Chain, 125 feet east of north end of dam, in boulder 4 by 10 feet, 4 feet from edge of dock; bronze tablet stamped "R 1788".....	1,787.422
Sixth Lake dam, 1.6 mile south of, summit of Seventh Lake Mountain, in boulder 5 feet broad, 8 feet west of road; chiseled square.....	2,134.07
Fawn Lake, 1.5 miles southeast of, on road from Sixth Lake to Kenwells, 900 feet south of summit, 25 feet north of small brook, in boulder 12 feet square and 8 feet high, 10 feet east of road at south end of level stretch of road; bronze tablet stamped "R 2263".....	2,262.079

WOODHULL, NORTHEAST VIA TRAIL TO NEAR PROCTORS CAMP, SOUTH BRANCH MOOSE RIVER (SINGLE-SPUR LINE).

Bisby lodge, on west shore of Bisby First Lake, about 400 feet north from lodge, 10 feet from bank, in shallow water, in 5 by 10-foot boulder; bronze tablet stamped "2035 R".....	2,034.375
Deadmans Gulch, east of mouth, 20 feet north of Canachagala Stillwater of South Branch Moose River, near site of old dam, 14 feet above water, in large boulder; copper bolt stamped "1769 R".....	1,768.761

NORTH LAKE EAST TO HONNEDAGA LAKE.

North Lake (Atwell post-office), 100 feet east of State House, in rock; aluminum tablet stamped "1829 R".....	1,828.245
Honnedaga Lake, 400 feet west of, on north side of road to North Lake, in large rock; bronze tablet stamped "2221 A".....	2,221.110
Honnedaga Lake, Herkimer Landing, 325 feet from lake, 35 feet southwesterly from corner of barn, in very large boulder; copper bolt stamped "2223 Ft. R".....	2,222.668
Honnedaga Forest Lodge, in south face of large boulder 50 feet north of office building; aluminum tablet stamped "2205 A".....	2,205.015

HONNEDAGA, NORTHEAST VIA THIRD STILLWATER, WEST CANADA LAKES, AND CEDAR LAKES, TO LITTLE MOOSE LAKES.

Honnedaga, 1.3 miles east of, at Herkimer-Hamilton County line, north side of trail, in large boulder (transit station No. 21 of county-line survey); bolt.....	2,149.390
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WEST CANADA LAKES QUADRANGLE.

Honnedaga, 7.8 miles east of, 250 feet east of ford of West Canada Creek, near head of Second Stillwater, in boulder; aluminum tablet stamped "2168 A".....	2,168.067
Mud Lake dam, 125 feet north of sluice of, 100 feet north of Indian hut, in large white boulder; aluminum tablet stamped "2356 A".....	2,355.722
Buck, 400 feet east of Cedar Lake, on trail to Speculator, northwest corner of camp; copper bolt stamped "U. S. G. S. B. M. 2472 Ft. A".....	2,472.429

LITTLE MOOSE LAKE, WEST TO FAWN LAKE.

Little Moose Lake, 200 feet from, in rear of log house, in large rock; copper bolt stamped "2143 A".....	2,144.184
Little Moose Lake, 4.5 miles west of, on road to Kenwells, 0.3 mile west of Silver Run, at summit of hill, in large rock 5 feet south of road; aluminum tablet stamped "2049 A".....	2,049.583
Kenwells, 3,150 feet northeast of, north side of road to Fourth Lake and Wakely dam, in large rock; aluminum tablet stamped "1854 A".....	1,855.475

THIRD STILLWATER, WEST CANADA CREEK SOUTHEAST TO SPRUCE LAKE.

Spruce Lake, east side of, at Clark's camp, in large boulder; copper bolt stamped "2382 A".....	2,382.130
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HAMILTON, SARATOGA, AND WARREN COUNTIES.

LAKE PLEASANT AND STONY CREEK QUADRANGLES.

The elevations in the following list are based upon the heights of adjoining bench marks as published in this bulletin in accordance with the 1903 adjustment. The leveling on Stony Creek quadrangle was done partly in 1896 under the direction of Mr. W. H. Lovell, topographer, by Mr. Clark Brown, levelman; and partly in 1904 under the direction of Mr. Glenn S. Smith, topographer, by Mr. L. E. Tucker, levelman. The leveling on Lake Pleasant quadrangle was begun in 1896 under Mr. Lovell by Mr. Brown, extended in 1898 under Mr. A. M. Walker, topographer, by Mr. W. W. Gilbert, levelman, and completed in 1904 by Mr. Tucker, levelman, under Mr. Smith. Standard bench marks latest established are

stamped with the legend "ALBANY 1903 ADJ" and that set in 1898 at Lake Pleasant is stamped "A" all in addition to the figures of elevation, but those set in 1896 are without letters and, having been derived originally from erroneous North Creek datum, are stamped with figures mostly 4 feet too great.

LAKE PLEASANT QUADRANGLE.

PISECO, NORTHEAST ALONG HIGHWAY, TO SPECULATOR.

Lake Pleasant, north side of stone jail, 6 inches east of northeast corner, 3.5 feet above ground; Feet.
aluminum tablet stamped "1791 A" 1,790.543

NORTHVILLE, NORTHWEST ALONG HIGHWAY, TO SPECULATOR.

Hope schoolhouse, District No. 4, 75 feet west of, boulder 15 feet north of road; copper bolt stamped "U. S. G. S. B. M. 832 Ft." 828.311
Wells, Hosley House, in back yard of hotel, on rock 15 feet broad and 5 feet high; bronze tablet stamped "1026" 1,022.170
Wells, east end of abutment of covered bridge; chiseled circle and "B. M. B. X." 988.62
Wells, 0.3 mile north of, patent line monument in yard of white house opposite road to east, in ground 15 feet southeast of house; stone marked "△" (triangle is 6 inches on each side) .. 1,018.00
Wells, 2.5 miles northwest of, angle of road to Hamilton Lake, 40 feet from each road, west of junction, boulder 6 feet high and 15 feet broad; chiseled circle stamped "B. M. S." 1,593.24
Charley Lake, 25 feet southwest of schoolhouse opposite, in boulder 8 feet broad; copper bolt stamped "U. S. G. S. B. M. 1719" 1,714.685
Gilman Lake, white house opposite center of, 10 feet east of road at trail to Griffin; stone 100 feet south of building marked with chiseled circle above legend "B. M. C. K." (located 15 feet north of a stone marked in a similar manner with legend "B. M. C. J.") 1,730.28

BENSON CENTER, NORTHWEST ALONG ROAD, TO POINT 1.5 MILES SOUTH OF SILVER

LAKE, THENCE SOUTHWEST TO ARIETTA.

Silver Lake, 1.5 mile south of, on west bank of South Branch of Sacandaga Creek (Fly Stream) where crossed by Benson Center road, 10 feet north of Silver Lake trail, in large boulder; bronze tablet stamped "1865 ALBANY 1903 ADJ" 1,865.009

STONY CREEK QUADRANGLE.

BACHELLERVILLE, NORTH ALONG ROAD VIA MUD LAKE, TO WEST STONY CREEK,
THENCE NORTHEAST TO KNOWELHURST.

West Stony Creek, 4.2 miles south of, at outlet of Mud Lake, 135 feet west of log camp, on north side of road, in boulder; bronze tablet stamped "1689 ALBANY ADJ 1903" 1,689.369
West Stony Creek, 60 feet southeast from large stone chimney on south end of hotel, 20 feet southwest of southwest corner of ice house, in rock; bronze tablet stamped "1552 ALBANY 1903 ADJ" 1,552.773
Knowelhurst, southeast corner of foundation of Methodist Episcopal Church; bronze tablet stamped "1583 ALBANY" 1,584.375

WEST STONY CREEK, WEST VIA WILCOX LAKE TO WELLS-HOPE ROAD.

West Stony Creek, 3.7 miles west of, 20 feet east of south end of Bakertown flow dam, north side of road, in boulder; aluminum tablet stamped "1355 ALBANY 1903 ADJ" 1,355.079

GILMAN LAKE, NORTHEAST ALONG HIGHWAY, TO GRIFFIN.

Griffin, 30 feet above milldam, 5 feet north of road, 5 feet south of river; copper bolt in rock, stamped "U. S. G. S. B. M. 1280 Ft." 1,275.948

FRANKLIN, HAMILTON, HERKIMER, AND ST. LAWRENCE
COUNTIES.

BIG MOOSE, KILDARE, LONG LAKE, RAQUETTE LAKE, AND TUPPER LAKE QUADRANGLES.

The elevations in the following list are the result of a readjustment of leveling reported upon in the Appendixes to the Twentieth and Twenty-first Annual Reports of the Director of the United States Geological Survey, with a few additions. Refer to precise-level list for another elevation on Kildare quadrangle.

The leveling was done as follows: On Big Moose quadrangle, under Mr. A. M. Walker, topographer, in 1899, by Mr. W. W. Gilbert, levelman; and under Mr. J. H. Jennings,

topographer, in 1897, by Mr. Clark Brown, levelman. On Raquette Lake and Tupper Lake quadrangles, under Mr. Walker, in 1899, by Messrs. Gilbert and C. B. Bailey. On Long Lake quadrangle, under Mr. Walker, in 1899, by Messrs. Bailey and Gilbert; and under Mr. Glenn S. Smith, topographer, in 1901, by Mr. C. H. Semper, levelman. On Kildare quadrangle, under Mr. Smith, in 1902, by Mr. A. T. Fowler, levelman. The standard bench marks are mostly stamped "ALBANY" in addition to figures of elevation most of which are 1 foot in error.

BIG MOOSE QUADRANGLE.

EAGLE BAY, FOURTH LAKE TO SIXTH LAKE DAM.

Feet.

Fourth Lake, Fulton Chain, at Hess Inn, 175 feet east of sea wall, on lake front of lawn, 70 feet south of main hotel building, 40 feet north of boathouse and billiard room, on north bank of inlet of Fifth Lake Outlet, 3 feet northeast of sidewalk crossing; iron post stamped "R 1717" 1,716.417

FULTON CHAIN, NORTH ALONG THE NEW YORK CENTRAL AND HUDSON RIVER RAILROAD, TO NEHASANE.

Clearwater, 600 feet south of, 35 feet east of tracks, in west face of large boulder; bronze tablet stamped "1753 ALBANY" 1,751.911
Big Moose, 110 feet east of point of switch at east end of side track, 40 feet south of main track, 25 feet west of west line of Hennessey's Hotel, in northwest face of large boulder; bronze tablet stamped "2036 ALBANY" 2,034.324
Woods Lake, 0.37 mile south of, 62 rail lengths south of station, 575 feet north of milepost No. 100, 125 feet south of small stream, 20 feet west of track, in northeast face of large boulder; bronze tablet stamped "1881 ALBANY" 1,879.778
Beaver River, east side of railroad water tank, in east face of foundation stone under south support; aluminum tablet stamped "1693 ALBANY" 1,691.863
Keepawa station, 38 rails north of, 75 feet north of 90-mile post, 100 feet west of track, in east face of large boulder; aluminum tablet stamped "1722 ALBANY" 1,720.968
Nehasane, 200 feet south of Mr. Ames's house (Nehasane station), 20 feet west of main track, in east face of ledge of rock; aluminum tablet stamped "1789 ALBANY" 1,787.530

TUPPER LAKE QUADRANGLE.

NEHASANE, NORTHEAST ALONG RAILROAD, TO LONG LAKE WEST.

Bog Lake, 1.25 miles north of, 35 rail lengths north of milepost 81 miles from Malone, 35 feet west of track, in east face of large boulder; aluminum tablet stamped "1764 ALBANY" 1,762.673
Long Lake West, 215 feet north of People's Hotel, 30 feet east of track, in west face of outcrop of rock; aluminum tablet stamped "1789 ALBANY" 1,787.787

LONG LAKE WEST, NORTHEAST ALONG NEW YORK CENTRAL AND HUDSON RIVER RAILROAD TO TUPPER LAKE.

Horseshoe station, 50 feet north of, 50 feet west of track, in east face of large boulder 1 foot above ground; aluminum tablet stamped "1739 A" 1,738.177
Childwood, 40 rail lengths south of station on left of track, in face of rock cut; aluminum tablet stamped "ALBANY 1713" 1,713.164

LONG LAKE WEST, SOUTHEAST VIA LITTLE TUPPER LAKE, TO LONG LAKE.

Long Lake West, 4 miles east of, opposite 15-mile post, 10 feet from road, in southeast face of large boulder; aluminum tablet stamped "1839 ALBANY" 1,838.171
Little Tupper Lake, head of, at Loomis's camp, 150 feet southeast of camp, 25 feet from barn, north face of large boulder; aluminum tablet stamped "1760 ALBANY" 1,758.446
Little Tupper Lake, 0.12 mile east of, 115 feet west of 10-mile post, 8 feet north of road, 25 feet west of blacksmith shop at Moynahan's lumber camp, west face of large boulder; aluminum tablet stamped "1739 ALBANY" 1,738.170

KILDARE QUADRANGLE.

HORSESHOE, NORTH ALONG HIGHWAY, TO MASSAWEPIE LAKE, THENCE SOUTHEAST TO CHILDWOOD STATION.

Lake Massawepie, east side of, in yard of camp owned by Hotel Childwood, 30 feet west of road, east of two houses, in boulder; bronze tablet stamped "1540 ALBANY" 1,540.209

RAQUETTE LAKE QUADRANGLE.

BRANDRETH STATION, EAST ALONG ROAD, VIA BRANDRETH AND RAQUETTE LAKES,
TO LONG LAKE.

	Feet.
Brandreth Lake, Brandreth camps, northwest corner of clearing, 10 feet east of road, 40 feet south of edge of woods, south face of bowlder; aluminum tablet stamped "1915 ALBANY"	1,913.224
Brandreth Lake, foot of, 30 feet west of State road, 12 feet south of Brandreth Outlet, in north-east face of large bowlder; aluminum tablet stamped "1884 ALBANY"	1,882.656
Raquette Lake, Antlers Hotel, 30 feet west of ice house, in bed rock; aluminum tablet stamped "1811 ALBANY"	1,809.926
Raquette, Forked Lake Carry, at southwest corner of Carry and State road, 5 feet from road, 15 feet from Carry, in face of large bowlder; aluminum tablet stamped "1796 ALBANY" ...	1,796.420

BLUE MOUNTAIN LAKE, TO UPPER DOCK OF MARION RIVER CARRY.

Marion River Carry, opposite upper dock of, in the east face of ledge of rock on north side of road; aluminum tablet stamped "1793 ALBANY"	1,794.119
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LONG LAKE QUADRANGLE.

TUPPER LAKE JUNCTION, EAST ALONG ROAD TO WAWBEEK, THENCE SOUTH TO LONG LAKE.

Tupper Lake Junction, New York Central and Hudson River Railroad, Adirondack division, in foundation to water tank; aluminum tablet stamped "1555 ALBANY"	1,556.031
Tupper Lake, 3.75 miles east of, north side of road at crossing of Cornell forestry west line on top large bowlder 6 feet high; chiseled square	1,570.88
Raquette Falls, 150 feet west of Martin Talbot's, in bowlder; aluminum tablet stamped "ALBANY 1574"	1,574.634
Long Lake, island in lower end of, 120 feet west of Island House owned and occupied by Amos Robinson, in top of bowlder; aluminum tablet stamped "1638 ALBANY"	1,638.211

POINT 4 MILES WEST OF NEWCOMB, NORTH TO LAKE CATLIN (SINGLE-SPUR LINE).

Catlin Lake, Caughnawauga Club House, 50 feet east of boat house, large rock at edge of lake; aluminum tablet stamped "1603 COVINGTON 1901"	1,603.091
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TUPPER LAKE SOUTH VIA MOODY TO JENKINS POND (SINGLE-SPUR LINE).^a

Tupper Lake, 2.2 miles south of, at Simons Pond, end of iron bridge over Raquette River, east side; top of large bolt holding bridge plate on caisson pier	1,554.56
Tupper Lake, 10.6 miles south of, foot of Jenkins Pond, Litchfield Park, 50 feet east of farmhouse, at entrance to barn; aluminum tablet stamped "1748 COVINGTON 1901"	1,757.778

LONG LAKE, TO POINT 5 MILES NORTHWEST.

Long Lake, 5 northwest of, 250 feet north of Big Brook, 12 feet east of road, west face of large bowlder; aluminum tablet stamped "1722 ALBANY"	1,720.965
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FULTON, HAMILTON, AND MONTGOMERY COUNTIES.

FONDA, GLOVERSVILLE, LASSELLSVILLE, AND PISECO QUADRANGLES.

The elevations in the following list are based upon the Gristmill bench mark near Albany, the elevation of which is now accepted as 13.863 feet above mean sea level. These elevations result from a joint adjustment with older work to accord with the 1903 adjustment.

The leveling on the Fonda quadrangles was done in 1896 under the direction of Mr. W. H. Lovell, topographer, by Mr. A. F. Krause, levelman; that on the Gloversville quadrangle was done under the direction of Mr. Lovell, partly in 1900 by Mr. William Kelley, levelman, and partly in 1896 by Messrs. Krause and Brown, levelmen; that on the Lassellsville quadrangle was done in 1901 under the direction of Mr. A. C. Roberts, topographer, by Mr. Kelley, and that on the Piseco quadrangle was done partly in 1898 under Mr. A. M. Walker, topographer, by Mr. C. H. Semper, levelman, and in 1902 under the direction of Mr. J. H. Jennings, topographer, by Mr. J. B. Maguire, levelman. All standard bench marks dependent on this datum are stamped with the letters "ALBANY" in addition to figures of elevation.

^a Credit is due Mr. Wallace C. Johnson, Niagara Falls, N. Y., for a 10-foot correction made to this line by checked connection to first bench mark.

LASSELLSVILLE QUADRANGLE.

ST. JOHNSVILLE, NORTH ALONG ROAD VIA OPPENHEIM, TO EMMONSBURG, THENCE
WEST TO SALISBURY CENTER.

	Feet.
St. Johnsville, southwest corner of Grace Church (Christian), in water table; aluminum tablet stamped "360 ALBANY".....	360.523
Oppenheim, southwest corner of brick residence of John P. Swartout, on the western side, in limestone water table; bronze tablet stamped "1110 ALBANY".....	1,109.818

EMMONSBURG, NORTH TO OREGON.

Stratford (Devereaux), near southwest corner of Crossman's Hotel, on southerly side, in foundation wall; bronze tablet stamped "1074 ALBANY".....	1,074.472.
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OPPENHEIM, EAST ALONG ROAD VIA GAROGA, TO JOHNSTOWN.

Lassellsville, southeast corner of D. C. Leek's store, in foundation wall, east face; aluminum tablet stamped "1153 ALBANY".....	1,152.969
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ARIETTA, SOUTH TO CAROGA CORNERS.

Arietta, 240 feet north of Alex. Baudin's Hotel, on west side of road, in bed rock; bronze tablet stamped "1696 ALBANY".....	1,696.974
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CAROGA CORNERS, SOUTH TO GAROGA.

Rockwood, 0.67 foot from southeast corner of Caleb A. Long's residence, in south face of foundation wall; bronze tablet stamped "1045 ALBANY".....	1,045.380
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GLOVERSVILLE QUADRANGLE.

CAROGA CORNERS, NORTHEAST ALONG ROAD VIA BLEECKER CENTER, BENSON CENTER, AND BENSON, TO NORTHVILLE.

(The error distributed in this line is excessive.)

Caroga Corners, in field about 150 feet east of road intersection, in top of large boulder; bronze tablet stamped "1527 ALBANY".....	1,527.198
Benson Center Corners, 17 feet westerly from bars in wall, in field on farm of Ludwick Politch, on large boulder; aluminum tablet stamped "1288 ALBANY".....	1,288.862
Benson, 185 feet east of Methodist Church, nearly opposite Benson post-office, north side of road, in top of large boulder; aluminum tablet stamped "1139 ALBANY".....	1,138.783

PETERS CORNERS, SOUTH ALONG ROAD, TO BLEECKER VILLAGE (SINGLE-SPUR LINE).

Bleecker Village, in front of schoolhouse, District No. 4, on south side of road, in top of large boulder; aluminum tablet stamped "1506 ALBANY".....	1,505.840
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JOHNSTOWN, NORTHEAST ALONG RAILROAD, TO MAYFIELD.

Johnstown, station of the Fonda, Johnstown and Gloversville Railroad, in first stone below brick work at west corner of building; bronze tablet stamped "652".....	652.008
Johnstown, 2.12 miles north of, railroad bridge No. 5, on northeast corner of top stone, east end of abutment; chiseled square.....	749.62
Gloversville, station of the Fonda, Johnstown and Gloversville Railroad, in first stone below brickwork, 20 feet north of southwest corner of building; bronze tablet stamped "798".....	798.136
Broadalbin, top of frog in switch at junction.....	813.1
Mayfield, platform at railroad station.....	743.0
Mayfield, 60 feet east of gristmill, 30 feet from creek, 90 feet south of railroad track, in broad boulder; copper bolt stamped "U. S. G. S. B. M. 756 Ft.".....	752.199

FONDA QUADRANGLE.

AURIESVILLE, ALONG CANAL AND THENCE ALONG THE FONDA, JOHNSTOWN AND GLOVERSVILLE RAILROAD, TO JOHNSTOWN.

Auriesville, $\frac{3}{4}$ mile west of West Shore Railroad station, northwest end of west wing, bridge over canal, north abutment, in corner stone; chiseled square (State engineer bench mark No. 106).....	302.785
Auriesville, bridge over canal 0.5 mile west of West Shore Railroad station, in fourth course of north abutment, 1.5 feet east of east angle; cross cut in stone.....	302.32
Fultonville, bridge over Mohawk River, on top of coping of south abutment; chiseled square.....	294.04
Fonda, county court-house, in corner stone of fourth course of stones from top of foundation at northwest corner; bronze tablet stamped "294".....	293.764

Cayadutta Creek, railroad bridge over, in northeast corner of coping stone, southeast end of north abutment; chiseled square.....	Feet. 350.73
Sammons ville, station of the Fonda, Johnstown and Gloversville Railroad, in large stone at corner of foundation; chiseled square.....	387.24

PISECO QUADRANGLE.

OREGON, NORTH ALONG ROAD, TO RUDISTON.

Oregon, near northwest corner of schoolhouse, in large boulder on east side of road; bronze tablet stamped "1511 ALBANY"	1,511.201
Oregon, 4.2 miles north of, 300 feet north of Pawley House, east side of road, in large table rock; aluminum tablet stamped "1674 ALBANY"	1,674.064
Rudiston, 1.7 miles south of, in east end of north abutment of highway bridge over outlet to Piseco Lake at mill; bronze tablet stamped "1666 ALBANY"	1,666.813

MILL, SOUTH ALONG ROAD, TO ARIETTA.

Arietta, 4.7 miles north of, in east side of road at Gus Avery's house, in large rock; bronze tablet stamped "1703 ALBANY"	1,703.252
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MOREHOUSEVILLE, NORTHEAST ALONG ROADS AND TRAIL, TO METCALF LAKE
(SINGLE-SPUR LINE).

Metcalf Lake, on boulder on west side of trail; bronze tablet stamped "2380 ALBANY" ..	2,380.908
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MOREHOUSEVILLE, EAST ALONG ROAD, TO PISECO.

Morehouseville, 2.7 miles east of, 50 feet west of church, south side of road, on rock; chiseled circle, with legend "B. M. G. of N. Y. State Land Survey"	1,832.82
Morehouseville, 7.8 miles east of, top of rock south side of road; chiseled circle	1,865.34
Piseco, Irondequoit Club House basement; aluminum tablet stamped "1703 A"	1,702.803

PISECO, NORTHWEST TO SPRUCE LAKE.

Piseco, 5 miles north of, 50 feet north of old road running northeast to old lumber camp, in large boulder 10 feet east of road; copper bolt stamped "1964 A"	1,964.198
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FULTON, SARATOGA, AND WARREN COUNTIES.

BROADALBIN, GLENS FALLS, LUZERNE, SARATOGA, AND SCHUYLERVILLE QUADRANGLES.

The elevations published in the following list are based upon the Gristmill bench mark near Albany, the elevation of which is now accepted as 13.863 feet above mean sea level. They result from leveling reported in the Twenty-first Annual Report of the Director, United States Geological Survey, and in Bulletin No. 185, readjusted to conform with the "1903 adjustment." For additional elevations on Saratoga and Luzerne quadrangles see precise-level lists.

The leveling was done under the direction of Mr. W. H. Lovell, topographer; on Glens Falls and Schuylerville quadrangles in 1898 by Mr. Clark Brown, levelman, and on remainder in 1899 by Mr. J. E. Thomas, levelman, except line Mayfield to Northville in 1896 by Mr. Brown. The standard bench marks are stamped with the letters "ALBANY" in addition to the figures of elevation, except on Schuylerville quadrangle which are stamped "A" with figures of elevation in most cases 1 foot too high, and at Cranberry Creek stamped 4 feet too high and without letters.

SCHUYLERVILLE QUADRANGLE.

SCHUYLERVILLE, VIA BURGUYNE AND STAFFORD, TO SARATOGA.

Schuylerville, in front of station; top of rail.....	Feet. 175.0
Schuylerville, corner of College and Green streets; school building, under second window from west corner; bronze tablet stamped "216 A"	215.149
Victory Mills, in front of station; top of rail.....	192.7
Victory Mills, southwest corner of Gates avenue and Pine street, southeast corner of foundation of hotel, on projecting stone; chisel mark	200.64
Gates in front of station; top of rail	234.0
Burgoyne, bridge over Saratoga Lake outlet, north abutment, east face, corner of coping; chiseled square	210.75

	Feet.
Burgoyne, road crossing at station; top of rail	217.0
Stafford, in front of station; top of rail	209.9
Schuyler Junction, 1.5 miles west of, double-span bridge, center pier, southwest corner, coping; chiseled square	225.14
SARATOGA, ALONG THE FITCHBURG AND THE DELAWARE AND HUDSON RAILROADS NORTHEAST VIA GANSEVOORT, TO FORT EDWARD.	
Saratoga, 5.5 miles northeast of, South Wilton Church, south side near front, in foundation; bronze tablet stamped "327 A"	326.192
Gansevoort, 3.75 miles south of, railroad bridge over road, outside anchor; bolt in southeast wall plate	308.90
Gansevoort, Empire House, south side, near front, in brickwork; bronze tablet stamped "246 A"	245.213
SCHUYLERVILLE, TO CHAMPLAIN CANAL BRIDGE NO. 56.	
Schuylerville, Ferry Street Canal Bridge, towpath abutment, north wing, face corner, second step from bottom; chiseled cross in circle (Canal bench mark No. 42)	105.90
Schuylerville, 2 miles south of, Canal Bridge No. 56; towpath abutment, north wing, face corner; chiseled cross in circle (Canal bench mark No. 41)	107.15
SCHUYLERVILLE, EAST TO BALD MOUNTAIN, THENCE SOUTH TO EASTON CORNERS, THENCE WEST TO SARLES FERRY.	
Schuylerville, 1.5 miles north of, Canal Bridge No. 63, towpath abutment, south end, lower step, face corner; chiseled cross in circle (Canal bench mark No. 45)	107.36
Schuylerville, 1.75 miles north of, Lock No. 10; coping, southeast anchor; chiseled cross in circle (Canal bench mark No. 46)	109.05
Middle Falls, south bank of creek, 75 feet east of covered bridge, southeast corner of brick gristmill; bronze tablet stamped "303 A"	302.767
North Easton (Easton Corners), 0.1 mile north of, 10-foot arch culvert, southwest wing, first stone back of arch on level with base; bronze tablet stamped "332 A"	331.719
SARLES FERRY, NORTHEAST VIA QUAKER SPRINGS, TO STAFFORDS BRIDGE.	
Sarles Ferry, opposite, on Champlain Canal, waste weir No. 7, north wing, southeast corner of coping; painted cross in circle (Canal bench mark No. 37 and Deep Waterways bench mark)	103.195
Quaker Springs, 600 feet west of crossroads, north side of road, in outerop; bronze tablet stamped "321 A"	320.234
Schuyler, Staffords Bridge, east end of north abutment, back corner of coping; chiseled square	208.37
BALD MOUNTAIN, NORTH VIA DURKEETOWN, TO FORT EDWARD.	
Durkeetown Church, south side, 10 feet from rear corner, in stone foundation; bronze tablet stamped "171 A"	169.928
GLENDS FALLS QUADRANGLE.	
Fort Edward, Argyle Street Canal Bridge, north wing, east abutment, second step, face corner; chiseled cross in circle (Canal bench mark)	141.56
Fort Edward, Lock No. 15, southeast anchor; chiseled cross in circle (Canal bench mark 79)	148.52
Fort Edward, high school building, front entrance, in stone pilaster at left side; bronze tablet stamped "145 A"	144.571
SARATOGA QUADRANGLE.	
BALLSTON SPA, VIA FACTORY VILLAGE, TO MIDDLEGROVE.	
Factory village, east abutment of bridge over creek; bench mark at southwest corner	354.48
Rock City Falls, on wall of flume at Pioneer Mills, 50 feet south of track; chisel mark	400.49
Rock City Falls, southeast corner of mill, 40 feet east of stone bridge; aluminum tablet stamped "445 ALBANY"	445.760
EAST GALWAY, EAST TO SOUTH GREENFIELD.	
East Galway, in east side of foundation wall of Baptist Church; bronze tablet stamped "889 ALBANY"	889.598
Rock City Falls, 2.5 miles northwest of, near gristmill at Middlegrove; northwest corner of west abutment to iron bridge over Kayaderosseras Creek	523.56
Middlegrove, in east end of south abutment of iron bridge over Kayaderosseras Creek; bronze tablet stamped "523 ALBANY"	523.515
HADLEY, SOUTH TO CORINTH (SINGLE-SPUR LINE).	
Corinth, in northwest corner of Baptist Church; bronze tablet stamped "626 ALBANY" ..	626.057

BROADALBIN QUADRANGLE.

FACTORY VILLAGE, WEST VIA GALWAY AND BROADALBIN, TO MAYFIELD.

	Feet.
Galway, in northwest corner of Presbyterian Church; aluminum tablet stamped "838 ALBANY".....	838.450
West Galway, in northwest corner of foundation wall of Presbyterian Church; aluminum tablet stamped "871 ALBANY".....	871.942
Broadalbin, in southeast corner of brick Baptist Church; aluminum tablet stamped "820 ALBANY".....	820.567

MAYFIELD, EAST VIA NORTHAMPTON TO EAST GALWAY.

Northampton, on southeast corner of retaining wall at south approach to closed wooden bridge; State bench mark (Colvin's), chisel marked "B. M. No. 31".....	739.71
Northampton, 2.25 miles south of, on ledge of rock near crest of hill; State bench mark, chisel marked "72".....	1,019.87
Northampton, 2.9 miles south of, at intersection of roads, northwest corner, 50 feet north of road; old State bench mark.....	1,035.00
Hagedorns Mills, south abutment in southeast corner of bridge over creek; bronze tablet stamped "975 ALBANY".....	974.824
North Galway, square stone monument 200 feet north of road locally known as Mechanic street; stone chisel marked "N. Y. 17 S. S.".....	1,266.699

EDINBURG, SOUTH VIA BATCHELLERVILLE TO NORTHAMPTON.

Batchellerville, in southwest corner of Presbyterian Church foundation wall; bronze tablet stamped "771 ALBANY".....	770.450
Northampton, 0.36 miles northeast of, west side of road; chisel mark on boulder (old State bench mark).....	774.06
Northampton, 3.1 miles northeast of, on east side of road near yellow house; chisel mark on boulder (old State bench mark).....	799.96
Northampton, in northeast corner of Presbyterian Church; bronze tablet stamped "790 ALBANY".....	789.612

EDINBURG, WEST ALONG ROAD, TO NORTHVILLE.

Northville, northeast corner of Methodist Episcopal Church, corner of Main and Washington streets; aluminum tablet stamped "802 ALBANY".....	802.292
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MAYFIELD, NORTHEAST ALONG RAILROAD, TO NORTHVILLE.

Van Nostrands; road crossing at railroad station.....	743.0
Cranberry Creek, Main street, 300 feet north of railroad crossing and 100 feet west of track, in boulder 3 feet high; copper bolt stamped "U. S. G. S. B. M. 768 Ft.".....	763.790
Northville; platform of railroad station.....	765.0

LUZERNE QUADRANGLE.

HADLEY, WEST TO DAY, THENCE SOUTH TO EDINBURG.

Hadley, northwest corner of G. West's paper mill; aluminum tablet stamped "613 ALBANY".....	613.917
Hadley, 5.75 miles southwest of, 1,500 feet north of road, east side of lower River road leading to Conklingville, on boulder at intersection; old State bench mark, chiseled "B. M. 11".....	628.84
Conklingville, west end of south abutment of iron bridge over Sacandaga River; bronze tablet stamped "726 ALBANY".....	726.049

WEST DAY, EAST TO EFNER LAKE (SINGLE-SPUR LINE).

Day Center, 3 miles southeast of, on Lake road, near house owned and occupied by John S. Kinney, in ledge of rock; bronze tablet stamped "1009 ALBANY".....	1,009.590
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HADLEY, NORTH TO WARRENSBURG, THENCE WEST TO THURMAN.

Luzerne, on stepping stone in front of Catholic Church; chisel mark.....	665.03
Luzerne, 4.5 miles northeast of, west side of Warrensburg road, 300 feet south of house at edge of woods, in ledge of rocks; bronze tablet stamped "834 ALBANY".....	834.025
Warrensburg, on Main street, in southeast corner of stone building used as post-office; bronze tablet stamped "749 ALBANY".....	749.022
Thurman station, 1.25 miles north of, in abutment of Bridge No. 13, Adirondack Railway; aluminum tablet stamped "628 ALBANY 1899".....	628.264

STONY CREEK TO KNOWHURST.

Stony Creek, 0.4 mile south of, at northwest corner of steel-girder bridge No. 10 over Stony Creek, in coping stone of bridge seat; aluminum tablet stamped "600 ALBANY 1899".....	600.427
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HAMILTON AND OTSEGO COUNTIES.

RICHFIELD SPRINGS AND COOPERSTOWN QUADRANGLES.

The elevations in the following lists are based upon the Gristmill bench mark near Albany, the elevation of which is accepted as 13.863 feet above mean sea level. The initial points upon which these levels depend are at Herkimer, Little Falls, and Colliersville, points in the precise-level net, the bench marks at Herkimer and Little Falls having been re-covered by the recent precise leveling of the Army Engineers. The leveling was done under the direction of Mr. A. M. Walker, topographer, by Messrs. A. W. Gill and W. W. Gilbert, levelmen, during the season of 1899. All standard bench marks are stamped with the letters "ALBANY" or "A" in addition to the figures of elevation.

RICHFIELD SPRINGS QUADRANGLE.

MOHAWK, SOUTHEAST TO PAINES HOLLOW, THENCE EAST TO NEWVILLE, THENCE
VIA INDIAN CASTLE TO LITTLE FALLS.

	Feet.
Mohawk, 3.9 miles southeast of, Gilbert Day's stable, southwest corner of foundation; aluminum tablet stamped "719 ALBANY".....	719.230
Paines Hollow, 0.1 mile west of post-office, southwest corner of Dr. Henry Green's stable; aluminum tablet stamped "1133 ALBANY".....	1,133.300
Newville, southeast corner of stone mill belonging to Messrs. Lewis & Spoor; aluminum tablet stamped "552 A".....	552.700

PAINES HOLLOW, SOUTH THROUGH JORDANVILLE, TO RICHFIELD SPRINGS.

Richfield Springs, 1 mile northeast of, highway bridge at three corners, at center of east parapet wall, on coping stone; chisel mark.....	1,329.35
Richfield Springs, northwest corner of Gould avenue and Church street, southeast corner of Universalist Church; aluminum tablet stamped "1327 ALBANY".....	1,327.556

RICHFIELD SPRINGS, EAST VIA WARREN, TO EAST SPRINGFIELD.

Springfield Center, foundation of Baptist Church; aluminum tablet stamped "1257 ALBANY".....	1,257.736
East Springfield, west side of stone building used as post-office; aluminum tablet stamped "1324 ALBANY".....	1,324.721

NEWVILLE, VIA STARKVILLE, TO EAST SPRINGFIELD.

Starkville, Abram De Garino's mill, in wall 1 foot east of northwest corner of building, 4 feet above ground; aluminum tablet stamped "692 ALBANY".....	692.500
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COOPERSTOWN QUADRANGLE.

SPRINGFIELD CENTER, SOUTH TO COOPERSTOWN.

Cooperstown, northwest corner of county court-house; aluminum tablet stamped "1264 ALBANY".....	1,264.480
Cooperstown, opposite Cooperstown and Charlotte Valley railroad station; top of rail, main track.....	1,283.0

COLLIERSVILLE, ALONG THE DELAWARE AND HUDSON RAILROAD, TO COOPERSTOWN.

Milford, Methodist Church, northeast corner of foundation; aluminum tablet stamped "1207 ALBANY".....	1,207.200
Hartwick Seminary building, in foundation, east side; aluminum tablet stamped "1266 ALBANY".....	1,266.390
Hartwick Seminary, 1.4 miles north of, iron bridge over river, on capstone at northeast corner; chisel mark.....	1,179.37

HERKIMER, MADISON, ONEIDA, AND OTSEGO COUNTIES.

HARTWICK, ORISKANY, SANGERFIELD, AND WINFIELD QUADRANGLES.

The elevations in the following list are based upon the heights of bench marks at Earlville, Richfield Junction, and Richfield Springs, as determined in accordance with the 1903 adjustment. For elevations at Richfield Junction and Leonardsville on the Sangerfield quadrangle refer to the precise-level line, Utica to Sidney (pp. 18-19).

The leveling was done in 1904-5 by Mr. G. M. Dimmick, levelman, under the direction of Mr. J. H. Jennings, topographer, except 1905 work on Winfield quadrangle, which was under the direction of Mr. C. C. Bassett, topographer. Standard bench marks are stamped "1903 ADJ"; in addition to the figure of elevation. The letters "ALBANY" also were stamped upon those set in 1904.

SANGERFIELD QUADRANGLE.

RICHFIELD JUNCTION, ALONG THE DELAWARE, LACKAWANNA AND WESTERN RAILROAD, SOUTHWEST VIA WATERVILLE AND NEW BROOKFIELD, TO POOLVILLE.

	Feet.
Paris station, in foundation wall of the residence of J. W. Pugh, east end of north face; bronze tablet stamped "1423 1903 ADJ".....	1,423.286
Waterville, 150 feet west of station, in foundation wall of N. C. Bohn & Son's shoe shop, south end of east face; aluminum tablet stamped "1237 ALBANY ADJ".....	1,237.417
Sangerfield, 200 feet east of station, in foundation wall of residence of M. L. Williams; bronze tablet stamped "1250 ALBANY 1903 ADJ".....	1,250.190
North Brookfield, in foundation wall of Cedar Valley Hotel, north end of west face; aluminum tablet stamped "1201 ALBANY 1903 ADJ".....	1,200.680
Hubbardsville, in foundation wall of Hotel Green, east end of north face; bronze tablet stamped "1202 ALBANY 1903 ADJ".....	1,202.113

BOUCKVILLE, NORTHEAST ALONG THE NEW YORK, ONTARIO AND WESTERN RAILWAY, TO DEANSBORO, THENCE SOUTHEAST TO WATERVILLE.

Oriskany Falls, in foundation wall of the store of E. McGlynn, east end of south face; bronze tablet stamped "978 ADJ 1903".....	978.320
Deansboro, in foundation wall of the United States milk condensery, east end of south face; bronze tablet stamped "795 ADJ 1903".....	795.020
Forge Hollow, 0.51 mile southeast of, in foundation wall of stone schoolhouse, south end of east face; aluminum tablet stamped "987 ADJ 1903".....	986.810

RICHFIELD JUNCTION, SOUTH ALONG THE DELAWARE, LACKAWANNA AND WESTERN RAILROAD, TO BRIDGEWATER.

Bridgewater, in foundation wall of Congregational Church, north end of east face; bronze tablet stamped "1215 ALBANY 1903 ADJ".....	1,215.112
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WINFIELD QUADRANGLE.

BRIDGEWATER, EAST ALONG THE DELAWARE, LACKAWANNA AND WESTERN RAILROAD TO RICHFIELD SPRINGS.

West Winfield, in foundation of railroad public drinking fountain, 50 feet east of station; bronze tablet stamped "1182 ALBANY 1903 ADJ".....	1,182.308
East Winfield, 880 feet east of station; top of railroad milepost 298.....	1,214.16
Cedarville, in foundation wall of station, east end, north face; bronze tablet stamped "1292 ALBANY 1903 ADJ".....	1,291.955
Millers Mills, in foundation wall of station, north end, east face; bronze tablet stamped "1410 ALBANY 1903 ADJ".....	1,409.826
Millers Mills, 2.64 miles east of; top of milepost 304.....	1,472.14
South Columbia, in foundation wall of Methodist Church; bronze tablet stamped "1476 ALBANY 1903".....	1,476.007
South Columbia, 2.02 miles east of, top of railroad iron milepost 808.....	1,343.49

NORWICH CORNERS, SOUTHEAST TO MILLERS MILLS.

Jerusalem Hill, in foundation wall of Jerusalem Church, 24 inches above ground; bronze tablet stamped "1532 ADJ 1903".....	1,531.843
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MILLERS MILLS, NORTHEAST, ALONG HIGHWAY VIA COLUMBIA CENTER, TO MOHAWK.

Columbia Center, 4.16 miles east of Cedarville, in foundation wall of Methodist Church, south end of west face, bronze tablet stamped "1532 ADJ 1903".....	1,532.466
Denison Corners, in foundation wall of the residence of A. A. Wollber, south end of west face; bronze tablet stamped "1315 ADJ 1903".....	1,315.560

WEST WINFIELD, SOUTHEAST ALONG HIGHWAY, TO SCHUYLER LAKE.

Plainfield Center, in foundation wall of the Congregational parsonage, west end of south face; bronze tablet stamped "1756 ADJ 1903".....	1,755.843
West Exeter, in foundation wall of the store of Denis Harrington, north end of west face; bronze tablet stamped "1320 ADJ 1903".....	1,319.666

	Feet.
Exeter, in wall of stone store occupied by P. J. Horan, north end of west face; bronze tablet stamped "1656 ADJ 1903".....	1,655.488
Schuyler Lake, in wall of Universalist Church, south end, west face; aluminum tablet stamped "1313 ADJ 1903".....	1,312.548

HARTWICK QUADRANGLE.

SCHUYLER LAKE, SOUTHEAST TO COOPERSTOWN.

Oakville, in foundation wall of Hotel Ayres, south end of east face; bronze tablet stamped "1278 ADJ 1903".....	1,277.753
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ORISKANY QUADRANGLE.

PARIS STATION, NORTH TO PARIS, THENCE EAST TO SAUQUOIT.

Paris, in foundation wall of Episcopal Church, south end of west face; bronze tablet stamped "1497 ADJ 1903".....	1,497.371
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ALBANY, MONTGOMERY, OTSEGO, AND SCHOHARIE COUNTIES.

BERNE, CANAJOHARIE, AND SCHOHARIE QUADRANGLES.

The elevations in the following list are based upon the Gristmill bench mark near Albany, the elevation of which is now accepted as 13.863 feet above mean sea level. The descriptions are republished from Bulletin No. 185 and the Appendix to the Twentieth Annual Report of the U. S. Geological Survey, with elevations corrected to accord with the latest adjustment. The leveling on the Canajoharie and Schoharie quadrangles was done in 1898, under the direction of Mr. C. C. Bassett, topographer, by Mr. Clark Brown, levelman, and that on the Berne quadrangle was done partly in 1898-9, under the direction of Mr. A. M. Walker, topographer, by Mr. Seth Van Loan, levelman, and finished in 1900 under Mr. Glenn S. Smith, topographer, by Mr. J. H. Hodges, levelman. The standard bench marks are stamped "ALBANY" or "A" in addition to the figures of elevation.

BERNE QUADRANGLE.

DELANSON, SOUTH TO GALLUPVILLE, THENCE SOUTHEAST TO EAST BERNE.

	Feet.
Delanson, in front of station; top of rail.....	813.0
Gallupville, Dutch Church, in wall near southeast corner; bronze tablet stamped "831 ALBANY".....	831.310
Berne, Lutheran Church, in southeast corner; bronze tablet stamped "1015 ALBANY".....	1,014.986

BERNE, SOUTHEAST VIA SOUTH BERNE, TO WESTERLO, THENCE NORTH TO EAST BERNE.

Westerlo, bridge over creek, in top of south end of east abutment; bronze tablet stamped "1144 ALBANY".....	1,144.094
East Berne, west entrance to village, 300 feet east of Berne road intersection, in embedded stone at bend in road; bronze tablet stamped "1174 ALBANY".....	1,174.310

EAST BERNE, NORTH TO ALTAMONT, THENCE NORTHWEST ALONG THE DELAWARE AND HUDSON RAILROAD, TO DELANSON.

Altamont, in foundation wall southwest side of Altamont Hotel; bronze tablet stamped "464 ALBANY".....	464.780
Knox, 1.75 miles west of station, 900 feet west of road crossing, small culvert; point on north end, chiseled circle.....	771.86
Duane, 900 feet east of, south end of east abutment of bridge; point on top.....	894.94

WESTERLO, WEST TO RENSSELAERVILLE.

Rensselaerville, southwest corner Miner's storehouse, in stone sill; bronze tablet stamped "1367 ALBANY" a.....	1,369.568
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CANAJOHARIE QUADRANGLE.

CANAJOHARIE TO AMES (MEAN OF DIRECT AND REVERSE LINES).

Canajoharie, Union Free School, west front, south of stone steps, in stone balustrade; aluminum tablet stamped "A 350".....	350.301
Marshville, schoolhouse; south end of doorsill.....	675.72

a This elevation, 1,369.568, is possibly 2 feet too great.

AMES, EAST TO BLAINE, THENCE SOUTH TO SHARON.

	Feet.
Blaine, 50 feet from east coping of cemetery wall; aluminum tablet stamped "A 943".....	943.315
Sharon, opposite Lutheran Church and schoolhouse, outcropping ledge in field, southwest of road; aluminum tablet stamped "A 1212".....	1,212.822

SHARON, NORTHWEST TO SHARON SPRINGS STATION.

Sharon Center, schoolhouse; north end of doorsill.....	1,437.77
Sharon Springs, 700 feet north of main east and west road through Rockville, 500 feet from top of hill, in outcrop on west side of street; aluminum tablet stamped "A, 1295".....	1,295.007
Sharon Springs, in front of station; top of rail.....	1,353.7

SHARON SPRINGS STATION, NORTHWEST TO SPROUT BROOK, THENCE EAST TO AMES.

Sprout Brook, 1 mile south of, at road corner; south end of schoolhouse doorsill.....	783.73
Hessville, 0.5 mile south of schoolhouse, 150 feet north of road to west, opposite house and 15 feet east of road, in boulder 8 feet broad; aluminum tablet stamped "A 826".....	825.987

FORT PLAIN, WEST TO HALLSVILLE.

Fort Plain, Erie Canal Lock No. 32, towpath coping, end of anchor, northeast gate; chiseled cross within circle (Canal B. M. No. 171).....	312.151
Fort Plain, Union Free School, Division street front, water table 1 foot from south corner; aluminum tablet stamped "A 316".....	317.090
Fort Plain, 1.5 miles west of, Valley schoolhouse; west end of doorsill.....	394.53
Hallsville, south end of cheese factory, stone foundation, 1 foot from east corner; aluminum tablet stamped "A 509".....	509.242

SCHOHARIE QUADRANGLE.

Shutts Corners, schoolhouse; east end of doorsill.....	1,145.97
Barnerville, 200 feet west of covered bridge, 100 feet north of Main street, at iron bridge over mill race, south abutment, east wing; aluminum tablet stamped "A 827".....	827.253

BARNERVILLE, EAST TO SCHOHARIE, THENCE SOUTH TO MIDDLEBURG.

Schoharie, court-house, south side of south door in west front, beveled jamb; aluminum tablet stamped "A 611".....	611.077
Schoharie, 1.25 miles south of Bridge street, on railroad bridge, north abutment, west wing, second step; domelike fossil 6 inches from face.....	609.43
Middleburg, schoolhouse, east front, south of entrance, in foundation wall; aluminum tablet stamped "A 649".....	649.551
Breakabeen, Lutheran Church, in west foundation, 5 feet from corner; aluminum tablet stamped "A 754".....	754.323
West Fulton, iron bridge across Panther Creek, south abutment, east end, in coping; aluminum tablet stamped "A 1156".....	1,157.150
Vintonton, 0.25 mile south of, schoolhouse; south end of doorsill.....	1,390.44

MIDDLEBURG, SOUTH TO FRANKLINTON.

Middleburg, 1.75 miles southeast of, iron bridge, north abutment, east wing, on bridge seat; chiseled square.....	743.47
Franklinton, schoolhouse, southwest corner of foundation; aluminum tablet stamped "A 1215".....	1,214.907

DUTCHESS, ORANGE, AND ULSTER COUNTIES.

NEWBURG, POUGHKEEPSIE, RHINEBECK, ROSENDALE, AND SCHUNEMUNK QUADRANGLES.

The elevations in the following list are based upon the Gristmill bench mark near Albany, the elevation of which is now accepted as 13.863 feet above mean sea level. The descriptions are republished from Bulletin No. 185, with elevations corrected to accord with the 1903 adjustment. For additional elevations on Newburg and Poughkeepsie quadrangles refer to "Precise leveling."

The leveling on Rosendale quadrangle was done partly in 1900 under Mr. C. C. Bassett, topographer, by Mr. W. S. D. Moore, levelman, and completed in 1901 under the direction of Mr. J. H. Jennings by W. E. Greene, levelman. The remainder was done under Mr. C. C. Bassett, topographer, as follows: On Schunemunk and Poughkeepsie quadrangles and on part of Rhinebeck quadrangles in 1899 by Mr. Seth Van Loan, levelman; on Newburg quad-

rangle in 1900 by Mr. G. Bailey, levelman; on remainder of Rhinebeck in 1900 by Mr. W. S. D. Moore, levelman. The standard bench marks are stamped with letters "ALBANY" in addition to figures of elevation. Those on the Schunemunk quadrangle are stamped mostly 2 feet too low.

POUGHKEEPSIE QUADRANGLE.

POUGHKEEPSIE, NORTHEAST TO PLEASANT VALLEY.

	Feet.
Poughkeepsie station, second step from east end of column on north side of arch bridge, keyed in fifth stone above ground; brass bolt stamped "+"	43.334
Poughkeepsie, city hall, in front face; aluminum tablet stamped "ALBANY 173"	172.991
Poughkeepsie, south end of first bridge east of station, over small creek; point on corner first step, east abutment	172.94
Poughkeepsie, northwest end of west abutment of small bridge east of Van Wagner crossing; point on top of stone	243.21
Poughkeepsie, 1 mile west of Pleasant Valley, at Landis place, third step from top, south end, west abutment, cattle pass and bridge; point in corner	232.57
Pleasant Valley, 300 feet east of station, in face of rock north side of track; bronze tablet stamped "ALBANY 211"	211.416

HIGHLAND, SOUTH ALONG THE ERIE RAILROAD, TO MILTON.

Milton, south side of Townsend's store, in window sill; bronze tablet stamped "9 ALBANY"	9.000
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HIGHLAND, NORTH TO COLLEGE POINT.

Highland, Poughkeepsie bridge, west abutment, southwest corner, top stone; chiseled mark	225.31
Highland, in front of West Shore Railroad station; top of west rail	10.2
Highland, 2 miles north of, east end of south wall of open culvert; chiseled mark	8.90

RHINEBECK QUADRANGLE.

PLEASANT VALLEY, NORTHEAST TO CLINTON CORNERS, THENCE SOUTH TO WASHINGTON HOLLOW.

Salt Point, 1 mile east of, south end of west abutment of Leggetts Bridge; corner second stone from top	267.31
Clinton Corners, north end of west abutment of bridge over Salt Point Creek, in coping stone; bronze tablet stamped "ALBANY 244"	244.735
Hibernia, south abutment, near end of truss bridge over creek; point on east side	251.43

COLLEGE POINT, NORTH ALONG THE WEST SHORE RAILROAD, TO KINGSTON.

College Point, 180 feet north of "Watchman's Box," on east end of north wall of culvert; chisel mark	65.42
West Park, West Shore Railroad station, in north wall at northwest corner; bronze tablet stamped "113 ALBANY"	113.842
Esopus, at crossing; top of rail	117.3
Esopus, 0.7 mile north of, south abutment, on east end of bridge; chiseled mark	122.16
Ulster Park, 300 feet south of station, at crossing; top of rail	149.7
Port Ewen, 500 feet south of station, at crossing; top of east rail	160

ROSENDALE QUADRANGLE.

KINGSTON, WEST ALONG THE ULSTER AND DELAWARE RAILROAD, TO BRODHEAD.

Kingston, city hall; in center of face wall of front portico; aluminum tablet stamped "223 ALBANY"	223.760
Bridge No. 6, Ulster and Delaware Railroad, east abutment, north end, on top stone; chisel mark	155.94
Kingston Creek Bridge, on north end of west abutment; chisel mark	165.01
Stony Hollow, 0.25 mile north of, Bridge No. 12, east abutment, south end, top stone; chisel mark	459.34
West Hurley, 0.5 mile east of railroad station, 100 feet northwest of road crossing on south side of highway; bronze tablet stamped "546 ALBANY"	546.312
West Hurley, in front of station; top of rail	531
Olive Branch, in front of station; top of rail	515.2
Olive Branch, 400 feet west of station, Bridge No. 17, west abutment, north end, top stone; chisel mark	512.22
Olive Branch, 2.5 miles west of, Bridge No. 20, east abutment, south end, top stone; chisel mark	506.37
Brodhead Bridge, east abutment, north end; chisel mark	502.21
Brodhead, at Ulster and Delaware Railroad crossing; top of rail	503.4

SHOKAN, SOUTHEAST ALONG PUBLIC ROAD, TO ALLIGERVILLE.

	Feet.
Krumville, 1.5 miles southeast of, at L. D. Christiana's house, in northeast corner of foundation wall; bronze tablet stamped "827 ALBANY 1902".....	827.287

ALLIGERVILLE, NORTHEAST VIA ROSENDALE, TO RIFTON.

Alligerville, iron bridge over Rondout Creek, east end of south abutment; bronze tablet stamped "220 ALBANY 1901".....	220.405
Rosendale, road crossing at station; top of rail.....	182.5
Rifton, 150 feet from post-office, east side of road, rock ledge; bronze tablet stamped "170 ALBANY 1901".....	169.887

ROSENDALE, SOUTH ALONG THE WALLKILL VALLEY RAILROAD, TO NEWPALTZ.

Springtown, farm crossing at station; top of rail.....	188.4
Newpaltz, 150 feet north of station, at road crossing; top of rail.....	207.5

ROSENDALE, ALONG THE WALLKILL VALLEY RAILROAD, TO KINGSTON..

Binnewater, road crossing; top of rail.....	206.1
Whiteport, in front of station: top of rail.....	180.4

NEWBURG QUADRANGLE.

NEWBURG, WEST VIA COLDENHAM TO MONTGOMERY, THENCE NORTH TO NEW HURLEY STATION.

Newburg, southwest corner of post-office building, to right of entrance; aluminum tablet stamped "95".....	94.404
Coldenham, 0.2 mile west of, at entrance to A. B. Lindsay's place, large stone gatepost; aluminum tablet stamped "ALBANY 434".....	433.619
Berea, crossing of Philadelphia and Reading Railroad; top of west rail of main track.....	410.3
Walden, southeast corner of National Bank of Walden; aluminum tablet stamped "ALBANY 376".....	375.136
Walden, in front of Wallkill Valley Railroad station; top of west rail, main track.....	353.2
Borden condensed-milk factory, on west end of culvert over stream flowing into pond, stone on southeast corner of coping; chisel mark.....	292.52
Wallkill, 400 feet south of station, at highway crossing; top of rail.....	279.1
Wallkill, foundation of water tank; point cut on stone.....	279.13

NEW HURLEY POST-OFFICE, SOUTHEAST VIA PLATTEKILL AND BALMVILLE, TO NEWBURG.

Plattekill, 0.2 mile east of, north end of bridge over stream flowing south, on top stone of retaining wall; chisel mark.....	554.15
Balmville, on stone foundation of fence surrounding big tree; chiseled point.....	194.60

NEW HURLEY STATION, NORTH VIA GARDINER TO NEWPALTZ, THENCE EAST TO HIGHLANDS.

Gardiner station, 150 feet south of, in east wall of culvert; bronze tablet stamped "ALBANY 309".....	308.097
Forest Glen station, 0.2 mile south of, south end of trestle, east side of track, on wall; chisel mark.....	297.73
Newpaltz, Newpaltz Savings Bank, southwest corner; bronze tablet stamped "ALBANY 237".....	236.022
Lloyd, Centerville Hotel, southeast corner; bronze tablet stamped "ALBANY 359".....	358.177

LLOYD, SOUTHWEST TO CLINTONDALE.

Clintondale, Ambrose's store, southwest corner; bronze tablet stamped "ALBANY 553".....	552.740
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SCHUNEMUNK QUADRANGLE.

CORNWALL, VIA NEWBURG JUNCTION ALONG THE ERIE RAILROAD, TO OXFORD.

Cornwall, 600 feet north of, New York, Ontario and Western Railway bridge, in face of west abutment; bronze tablet stamped "ALBANY 271".....	273.714
Mountainville, 0.5 mile north of, west end of south abutment of railroad bridge; point on bridge seat.....	229.58
Woodbury, 200 feet south of station; point on northeast foot block at end of truss bridge.....	435.90
Central Valley, 200 feet north of station, south abutment, east end bridge seat; point on stone.....	484.20
Central Valley, west of Noxon's store, in large stone in retaining wall of Finken's place; bronze tablet stamped "ALBANY 488".....	489.334

	Feet.
Newburg Junction, 0.5 mile north of, east end of south abutment of railroad bridge; point on bridge seat.....	518.22
Arden, 300 feet north of, north abutment of bridge over stream; point on top, east end, chisel mark.....	522.16
Arden, 300 feet north of station, railroad bridge over stream, in pier top, east end; bronze tablet stamped "ALBANY 519".....	520.695
Doyles, 0.25 mile east of, face of large boulder in road; bronze tablet stamped "ALBANY 718".....	719.921
Turners, 300 feet west of, west abutment of bridge, on north end; chisel mark.....	554.78
Monroe, 0.5 mile east of, west abutment of culvert; point on top of north end.....	592.32
Oxford, 300 feet east of, east abutment of overhead bridge; point on north end.....	531.92

OXFORD, NORTH TO BURNSIDE, THENCE EAST TO CORNWALL.

Craigville, 300 feet north of, south abutment, east end of cattle pass; point second step from top.....	423.42
Farmingdale, 500 feet north of, south abutment, east end of cattle pass; point on top.....	379.27
Elsmere, 0.5 mile south of, west end of north abutment of cattle pass; point on second step from top.....	372.80
Burnside, 1.25 miles east of, in west face of east abutment of concrete-arch railroad bridge No. 35; bronze tablet stamped "359 ALBANY".....	358.823
Meadowbrook, 400 feet east of; point on north end of east abutment of culvert.....	337.2
Cornwall, 0.4 mile east of, south abutment of Erie Railroad bridge; point on coping at west end	338.34
Cornwall, west abutment of New York, Ontario and Western Railway bridge; point on step, north end.....	271.82

COLUMBIA AND DUTCHESS COUNTIES.

CATSKILL, CLOVE, COPAKE, COXSACKIE, KINDERHOOK, AND MILLBROOK QUADRANGLES.

The elevations in the following list are based upon the Gristmill bench mark near Albany, the elevation of which is now accepted as 13,863 feet above mean sea level. The descriptions are mostly republished from Bulletin No. 185, and the elevations are corrected to accord with the latest adjustment.

The leveling on Millbrook quadrangle was done in 1899 under the direction of Mr. C. C. Bassett, topographer, by Mr. Seth Van Loan, levelman; that on Catskill, Kinderhook, and part of Copake quadrangles was done in 1900 under Mr. Bassett, by Mr. George Bailey, levelman; the remainder on Copake quadrangle was done in 1902 under Mr. A. H. Bumstead, topographer, by Mr. G. C. Mills, levelman. The standard bench marks are stamped with letters "ALBANY" in addition to the figures of elevation.

CLOVE QUADRANGLE.

	Feet.
Dover Plains, in northwest corner of bank; aluminum (?) tablet stamped "ALBANY 406".	406.566

MILLBROOK QUADRANGLE.

WASHINGTON HOLLOW, EAST VIA MILLBROOK, TO DOVER PLAINS.

Millbrook, 2 miles west of, south parapet wall of bridge over stream; point in stone.....	459.56
Millbrook, west side of Millbrook Bank near southwest corner; aluminum tablet stamped "ALBANY 568".....	568.824

DOVER PLAINS, NORTH ALONG THE HARLEM RAILROAD, TO MILLERTON.

Wassaic, 600 feet south of, north abutment of bridge over stream; point on west end.....	453.13
Amenia, in corner stone southwest corner of America Bank; aluminum tablet stamped "ALBANY 573".....	573.87
Coleman, 0.87 mile north of, west end of north abutment overhead bridge; point on second step from top.....	586.68
Millerton, first bridge north of, south abutment, west end; point on second stone from top.	499.56

^a This bench mark was set in 1905 by Mr. C. E. Knickerbocker, engineer maintenance of way, New York, Ontario and Western Railway, and replaces the old bench mark stamped "357" which is at the same elevation but incased in concrete reinforcement of abutment.

MILLERTON, VIA SHEKOMEKO ALONG THE NEWBURG, DUTCHESS, AND CONNECTICUT
RAILROAD, TO PINE PLAINS.

	Feet.
Millerton, in northeast front of brick block hotel; aluminum tablet stamped "ALBANY 701"	701.081
Winchells station, 1.25 miles west of, south abutment of cattle pass Bridge No. 66; point on east end	864.73
Shekomeko, 1 mile north of, south abutment of overhead Bridge No. 63; point on fourth step from top, west end	731.87
Bethel station, west abutment of Bridge No. 57; point on north end, chisel mark "U. S."	500.79
Pine Plains, in foundation stone of Myer's dwelling, near southeast corner of house; aluminum tablet stamped "ALBANY 474"	474.626

PINE PLAINS, VIA STISSING AND STANFORDVILLE, TO CLINTON CORNERS.

McIntyre, Central New England bridge, in face of south abutment, third course from ground; aluminum tablet stamped "ALBANY 399"	399.388
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COPAKE QUADRANGLE.

MILLERTON, NORTH ALONG THE NEW YORK CENTRAL AND HUDSON RIVER RAILROAD,
TO PHILMONT.

Mount Riga station, 1.5 miles north of, stream to west; northwest corner of culvert (stream 3 feet lower)	773.43
Boston Corners, 300 feet south of station, in top of southeast corner of culvert on New York Central Railroad; bronze tablet stamped "ALBANY 727"	727.139
Copake Ironworks, 500 feet south of station; northwest abutment of railroad bridge (stream 25 feet below)	674.33
Crarryville, 500 feet west of station, south side of track, in west abutment of railroad bridge; bronze tablet stamped "ALBANY 635"	635.151
Martindale station, just north of, at crossing; west rail	639.5

BOSTON CORNERS, WESTWARD VIA THE CENTRAL NEW ENGLAND RAILWAY, TO GALLATINVILLE, THENCE NORTH ALONG HIGHWAYS VIA GLENCO MILLS,
TO CLAVERACK, THENCE NORTHEAST TO PHILMONT.

Boston Corners, 300 feet south of station, in top of southeast corner of culvert on New York Central Railroad; bronze tablet stamped "ALBANY 727"	727.139
Copake, Central New England bridge No. 80, on north end of west abutment; chiseled square	537.69
Copake, 2.5 miles southwest of, Bridge No. 85, 900 feet southeast of highway and 0.5 mile southeast of Millers Pond, in east corner of southwest abutment; bronze tablet stamped "ALBANY 508"	508.350
Ancram, stone-arch highway bridge over Roeliff Janson Kill, on south end of west parapet; chiseled square	480.76
Gallatinville, highway bridge over Roeliff Janson Kill, east wing of north abutment; aluminum tablet stamped "405 ALBANY"	405.192
New Forge, on south end of west abutment of iron bridge over Claverack Creek; bronze tablet stamped "516 ALBANY"	515.995
West Taghkanick, 0.9 miles north of, 600 feet south of Geo. Sears's dwelling; 1-inch steel bar 15 inches long sunk flush in rock ledge on west side of road, marked "U. S. B. M. 289"	289.61
Glenco Mills, iron highway bridge over Taghkanick Creek, in west wing wall of south abutment; aluminum tablet stamped "261 ALBANY"	261.703
Claverack, 0.5 miles southeast of, iron highway bridge, center pier, east end; bronze tablet stamped "156 ALBANY"	155.841

KINDERHOOK QUADRANGLE.

PHILMONT, NORTH TO CHATHAM.

Philmont, west side of Empire House, in stone over cellar window; bronze tablet stamped "ALBANY 525"	525.504
Ghent, just south of New York Central Railroad station, at crossing; east rail, east track	397.3
Chatham, east side of tenth roof support from east end of station, train side; tablet (bench mark of the Massachusetts topographical survey commission)	470.912
Chatham, in northeast corner of Masonic Block, about 3 feet from ground; aluminum tablet stamped "ALBANY 470"	470.990
Chatham, 1 mile north of, on west abutment of Bridge No. 201, in top stone; bench No. 84 of the Massachusetts topographical survey commission, marked by a hole and "B. S.", bottom of hole	519.457

NIVERVILLE, SOUTHWEST VIA STUYVESANT FALLS, TO HUDSON.

	Feet.
Niverville, near northwest corner of water tank, in brick about 4 feet from ground; bench mark of the Massachusetts topographical survey commission, marked "B-O-M", center of hole.....	322.936
Niverville, in southwest corner of brick water tank, 3 feet from ground; bronze tablet stamped "ALBANY 323".....	322.924
Valatie, road crossing; west rail.....	245
Kinderhook, 100 feet south of station, north side of highway, 10 feet west of track; top stone over drain.....	259.02
Stuyvesant Falls, west end of bridge over Kinderhook Creek, in end of north wing wall; bronze tablet stamped "ALBANY 156".....	156.376
Rossmann station, road crossing 100 feet south of; east rail.....	63.6
Stockport, road crossing just north of station; west rail.....	47.0
Stottville, 150 feet north of station, road crossing; east rail.....	125.4

CATSKILL QUADRANGLE.

Hudson, on northeast end of upper station, 1 foot from ground; bronze tablet stamped "ALBANY 151".....	151.543
Hudson, Diamond street; crossing electric railway and railroad.....	151.1

COXSACKIE QUADRANGLE.

Hudson station; United States Coast and Geodetic Survey bench mark No. 4 (railroad bench, the usual round-headed bolt, in west side of top of stone pier under iron column, under overhead bridge in street leading to docks and Athens Ferry; the first one north of Hudson station. The pier is under the second column from south end in the east row of three).....	10.686
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GREENE, ULSTER, AND SCHOHARIE COUNTIES.

GILBOA, KAATERSKILL, AND PHOENICIA QUADRANGLES.

The elevations in the following list are based upon the Gristmill bench mark near Albany, the elevation of which is now accepted as 13.863 feet above mean sea level. The leveling was previously reported upon in Bulletin No. 185, but has been readjusted to accord with the 1903 adjustment of precise leveling. The leveling was done in 1900, under the direction of Mr. C. C. Bassett, topographer, by Messrs. W. S. D. Moore and George Bailey, levelmen. The standard bench marks are stamped "ALBANY" in addition to the figures of elevation.

PHOENICIA QUADRANGLE.

BOICEVILLE, NORTH TO PHOENECIA.

	Feet.
Mount Pleasant, in front of station; top of rail.....	713.9
Phoenicia, in front of station; top of rail.....	796.2
Phoenicia, Ulster and Delaware Railroad bridge, south pier, top of east end; aluminum tablet stamped "804 ALBANY".....	805.171

PHOENICIA, NORTHWEST ALONG THE ULSTER AND DELAWARE RAILROAD, TO HIGHMOUNT.

Shandaken, steel bridge at forks of road, top of southwest wing wall; bronze tablet stamped "ALBANY 1071".....	1,071.401
Big Indian, at station; passenger-room doorsill.....	1,213.85
Pine Hill, in front of station; top of rail.....	1,661.2

SHANDAKEN, SOUTHWEST TO BIG INDIAN, THENCE SOUTH TO SLIDE MOUNTAIN POST-OFFICE.

Slide Mountain, rock at northwest corner of post-office; bronze tablet stamped "ALBANY 1665".....	1,665.070
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SHANDAKEN, NORTH TO LEXINGTON.

West Kill, 1.3 miles south of top of Deep Notch, west side of road, on bowlder; aluminum tablet stamped "ALBANY 1901".....	1,901.096
West Kill, small steel bridge on south of road, east sill; chisel mark.....	1,464.51

PHOENICIA, NORTHEAST TO LANESVILLE.

Chichester, in front of station; top of rail.....	1,014.7
Chichester, 1.7 miles northeast of, north abutment of bridge, east end, top stone; chisel mark.....	1,151.45

HUNTER, WEST TO LEXINGTON.

Feet.

Jewett Center, east abutment of East Kill bridge, north end, top stone; aluminum tablet stamped "1405 ALBANY"	1,405.728
Lexington, north pier of Schoharie Creek bridge, west end, top stone; aluminum tablet stamped "1329 ALBANY"	1,329.760

KAATERSKILL, QUADRANGLE.

LANESVILLE, NORTHEAST TO KAATERSKILL JUNCTION, THENCE NORTHWEST TO HUNTER.

Edgewood, 300 feet north of station, north pier of bridge, east end, in top stone; bronze tablet stamped "1790 ALBANY"	1,790.606
Hunter, 1 mile south of, east abutment of highway bridge, south end, top of stone; chisel mark	1,620.17
Hunter, public school building, north side of front entrance, in foundation wall; aluminum tablet stamped "1602 ALBANY"	1,602.562

GILBOA QUADRANGLE.

LEXINGTON, NORTH TO PRATTSVILLE.

Lexington, 2.5 miles north of, north abutment of Schoharie Creek Bridge, east end, top stone; chisel mark	1,275.76
Prattsville, 1 mile east of, east abutment of Red Kill Bridge, south end, top stone; chisel mark ..	1,181.18
Prattsville, public school building, in front wall; aluminum tablet stamped "1164 ALBANY" ..	1,164.638

PRATTSVILLE, EAST TO WINDHAM.

Windham, bridge over Batavia Creek on road to Hunter, top of north abutment, east end; bronze tablet stamped "1517 ALBANY"	1,517.884
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PRATTSVILLE, NORTH TO GILBOA.

Prattsville, at fork with Grand Gorge road, Schoharie Creek Bridge, east approach, top stone of north retaining wall at end of railing; chisel mark	1,151.04
Gilboa, 1.2 miles south of, south abutment of Manor Kill Bridge, east end, top stone; chisel mark	1,115.65
Gilboa, 800 feet north of, on east side of road, opposite bridge over Schoharie Creek, in ledge of rock; bronze tablet stamped "1010 ALBANY"	1,010.190

GILBOA, EAST TO MANORKILL.

Strykersville (West Conesville post-office), bridge 40 feet west of post-office, on southwest abutment; chisel mark	1,260.12
Conesville, bridge 150 feet west of post-office, on northeast corner abutment; chisel mark ..	1,383.23
Manorkill, white church opposite post-office, southeast corner; bronze tablet stamped "ALBANY 1515"	1,515.295

GILBOA, NORTH VIA BLENHEIM, TO BREAKABEEN.

Blenheim, 300 feet north of post-office, northwest side of road, in ledge of rock; aluminum tablet stamped "813 ALBANY"	813.430
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FRANKLINTON, SOUTH TO LIVINGSTONVILLE.

Livingstonville, in northwest corner of Methodist Church; bronze tablet stamped "ALBANY 1077"	1,077.310
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DELAWARE, OTSEGO, SCHOHARIE, AND ULSTER COUNTIES.

HOBART, MARGARETVILLE, AND RICHMONDVILLE QUADRANGLES.

The elevations in the following list are based upon the Gristmill bench mark, the elevation of which is accepted as 13,863 feet above mean sea level. They result from joint adjustment with previous work to accord with elevations by the 1903 adjustment at Poughkeepsie and East Worcester, points in the precise-level net.

The leveling on Hobart and part of that on Margaretville and Richmondville quadrangles was done in 1901 under the direction of Mr. J. H. Jennings, topographer, by Mr. William Kelley, levelman; the remainder on the Margaretville quadrangle was done by W. E. Greene, levelman, in 1901, under Mr. Jennings, and that on the Richmondville quadrangle in 1902 under Mr. C. C. Bassett, topographer. The standard bench marks are stamped with the letters "ALBANY" in addition to the figures of elevation

MARGARETVILLE QUADRANGLE.

HIGHMONT, EAST ALONG THE ULSTER AND DELAWARE RAILROAD, TO FLEISCHMANS,
THENCE NORTH TO ROXBURY.

	Feet.
Shandaken, steel bridge at forks of road, top of southwest wing wall; bronze tablet stamped "1071 ALBANY".....	1,071.401
Big Indian, passenger room at station; doorsill.....	1,213.85
Pine Hill, in front of station; top of rail.....	1,661.2
Fleischmans station, east abutment of Ulster and Delaware bridge No. 47, south end; aluminum tablet stamped "1515 ALBANY 1901".....	1,515.771
Kelleys Corners, in front of station; top of west rail.....	1,380.7
Halcottsville, in front of station; top of west rail.....	1,403.8
Halcottsville, 550 feet south of, Ulster and Delaware bridge No. 54, on top of south abutment, at west end; bronze tablet stamped "1399 ALBANY 1901".....	1,399.691
Halcottsville, 1.45 miles north of, at highway crossing; crest of dam.....	1,410.8

ARKVILLE, SOUTHEAST ALONG PUBLIC ROAD TO WEST SHANDAKEN.

Dry Brook, West Shandaken, front of Second Adventist Church, southwest corner; bronze tablet stamped "1628 ALBANY 1901".....	1,628.726
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ARKVILLE, SOUTHWEST ALONG HIGHWAY TO ARENA, THENCE SOUTHEAST TO GRANT
MILLS, THENCE SOUTH TO ULSTER-DELAWARE COUNTY LINE
ON COYKENDALL ROAD.

Margaretville, stone steps at entrance to People's Bank, west face; aluminum tablet stamped "1325 ALBANY 1901".....	1,325.581
Grant Mills, 2.9 miles south of, line between Delaware and Ulster counties, 1,380 feet north-westerly from large culvert, north side of Coykendall road, in large rock; bronze tablet stamped "2464 ALBANY 1901".....	2,465.526

NEAR DUNRAVEN, NORTH TO NEW KINGSTON.

New Kingston, north face of United Presbyterian Church, 2 feet west of belfry tower; aluminum tablet stamped "1685 ALBANY 1901".....	1,685.745
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HOBART QUADRANGLE.

ROXBURY, NORTHEAST ALONG ULSTER AND DELAWARE RAILROAD TO GRAND GORGE,
THENCE WEST TO HOBART.

Roxbury, in front of station; top of west rail.....	1,495.1
Roxbury, 0.85 mile north of, north abutment of Ulster and Delaware bridge No. 59, west end; aluminum tablet stamped "1499 ALBANY 1901".....	1,499.601
Grand Gorge station; platform.....	1,562.6
Grand Gorge, 125 feet east of main track and 100 feet north of station, top of large boulder; aluminum tablet stamped "1561 ALBANY 1901".....	1,561.901
South Gilboa station, under overhead bridge; top of west rail.....	1,748.8
Stamford, in front of station; top of south rail, main track.....	1,788.7
Hobart, 0.25 mile east of, west abutment of Bridge No. 70, south end of back wall; aluminum tablet stamped "1633 ALBANY 1901".....	1,634.701
Hobart, in front of station; top of north rail.....	1,636.0

STAMFORD, NORTHWEST ALONG HIGHWAYS TO NORTH KORTRIGHT, THENCE NORTH-
EAST TO NORTH HARPERSFIELD.

Stamford, Joseph Millan's brick store on Main street, in northwest face; aluminum tablet stamped "1826 ALBANY 1901".....	1,827.244
North Kortright, front of post-office, south side of road; spike in pine tree.....	1,517.43
North Harpersfield, southerly side of residence of Jas. A. Topping, under bay window, in foundation wall; bronze tablet stamped "1609 ALBANY 1901".....	1,610.221

RICHMONDVILLE QUADRANGLE.

NORTH KORTRIGHT, NORTHWEST TO FERGUSONVILLE, THENCE NORTHEAST TO CHAR-
LOTTEVILLE, THENCE NORTH TO EAST WORCESTER.

South Worcester, 6 feet north of southeast corner of Olmstead & Sturges's store, east side of foundation wall; aluminum tablet stamped "1373 ALBANY 1901".....	1,374.016
East Worcester, in front of station; top of east rail.....	1,427.63
East Worcester, 0.75 mile west of station (precise line), north end of culvert; tablet stamped "1406 ALBANY 1901".....	1,405.207

CHARLOTTESVILLE, NORTHEAST TO SUMMIT; THENCE SOUTH TO STEWART POST-OFFICE (SINGLE-SPUR LINE).

	Feet.
Summit, south side wall of Jump & Havens's drug store; bronze tablet stamped "2108 ALBANY 1902".....	2,108.96
Stewart, in southeast corner of post-office (Martin Vroman's house); bronze tablet stamped "1364 ALBANY 1902".....	1,364.230

COBLESKILL, NORTHWEST ALONG THE CHERRY VALLEY BRANCH OF DELAWARE AND HUDSON RAILROAD, VIA HYNDSDVILLE AND SEWARD, TO SHARON SPRINGS.

Hyndsville, in front of passenger room; top of high rail.....	1,115.6
Seward, in front of passenger-room door; top of rail.....	1,181.5
Seward, in front wall of general store; bronze tablet stamped "1186 ALBANY 1902".....	1,186.486
Hansons crossing; top of rail.....	1,217.0

SEWARD, WEST ALONG PUBLIC ROAD TO SOUTH VALLEY (SINGLE-SPUR LINE).

South Valley, Christian Church; bronze tablet stamped "1563 ALBANY 1902".....	1,563.183
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ORANGE, SULLIVAN, AND ULSTER COUNTIES.

ELLENVILLE AND SLIDE MOUNTAIN QUADRANGLES.

The elevations in the following list are based upon the Gristmill bench mark at Greenbush near Albany, the elevation of which is accepted as 13.863 feet above mean sea level. The initial elevation at Shokan was determined by readjustment of levels reported upon in Bulletin No. 185. The elevations accord with the 1903 adjustment.

The leveling was done under the direction of Mr. C. C. Bassett, topographer, in 1903, by Mr. G. M. Dimmick, levelman, except line Shokan to Boiceville run in 1900 by Mr. W. S. D. Moore, levelman. Standard bench marks of this list are stamped with the letters "ALBANY" in addition to the figures of elevation and year.

SLIDE MOUNTAIN QUADRANGLE.

BRODHEAD NORTHWEST TO BOICEVILLE.

	Feet.
Shokan, 0.2 mile east of station, west abutment of Bridge No. 22, north end, bedplate; bronze tablet stamped "532 ALBANY".....	533.351

SHOKAN TO OLIVE CITY, THENCE SOUTHWEST ALONG HIGHWAY TO SAMSONVILLE, THENCE SOUTH TO KERHONKSON, THENCE ALONG RAILROAD SOUTHWEST TO NAPANOCH.

Samsonville, 50 feet south of Methodist Church, in limestone outcrop; bronze tablet stamped "855 ALBANY 1903".....	855.411
Kerhonkson, in water table at center of east face of New York, Ontario and Western depot; aluminum tablet stamped "254 ALBANY 1903".....	253.760

NAPANOCH, NORTHWEST ALONG HIGHWAY TO EUREKA, THENCE NORTHEAST TO SUNDOWN (SINGLE-SPUR LINE).

Lackawack, 0.3 mile northwest of, in foundation wall of Methodist Church, east face, 5 feet from southeast corner; bronze tablet stamped "691 ALBANY 1903".....	691.304
Lackawack, 3.61 miles northwest of, highway bridge over small stream; point on top of west end of south abutment.....	760.32
Sundown, in foundation wall of Methodist Church, north end of west face; bronze tablet stamped "993 ALBANY 1903".....	993.485

POINT WEST OF SUNDOWN, NORTH ALONG HIGHWAY TO DENNING (SINGLE-SPUR LINE).

Denning, in foundation wall of Hotel Erts, east end of south face; aluminum tablet stamped "1965 ALBANY 1903".....	1,964.941
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ELLENVILLE QUADRANGLE.

NAPANOCH, SOUTH ALONG THE NEW YORK, ONTARIO AND WESTERN RAILWAY VIA SUMMITVILLE TO MIDDLETOWN.

Ellenville, in foundation wall of station, center of east face; aluminum tablet stamped "319 ALBANY 1903".....	319.518
Spring Glen, in foundation wall of station, center of west face; bronze tablet stamped "451 ALBANY 1903".....	451.361

	Feet.
Summitville, 150 feet north of station, north end of west retaining wall; point on top of stone sluiceway, square.....	546.44
Wurtsboro (Mamakating station), in foundation wall of station, north end of east face; bronze tablet stamped "723 ALBANY 1903".....	722.782
Bloomington, 0.6 mile south of, south end of east abutment of railroad bridge; point on top.....	713.53
Winterton, in front of station; top of east rail.....	598.7
Fair Oaks, in front of station; top of east rail.....	641.2
Crawford Junction, south end of east retaining wall of small culvert 60 feet south of station; point on top.....	591.93

CRAWFORD JUNCTION, NORTHEAST ALONG ERIE BRANCH TO PINE BUSH, THENCE TO
DWAARKILL (SINGLE-SPUR LINE).

Cireleville, 150 feet south of station, at highway crossing; top of east rail.....	621.8
Bullville, at highway crossing south of station; top of east rail.....	508.9
Bullville, in foundation wall of Methodist Church, north end of east face; aluminum tablet stamped "518 ALBANY 1903".....	517.840
Thompson Ridge, 60 feet south of station, highway crossing; top of east rail.....	459.4
Pine Bush, in foundation wall of Presbyterian Church, center of south face; bronze tablet stamped "397 ALBANY 1903".....	396.919
Dwaarkill, in foundation wall of the residence owned by Mr. Horne, center of north face; bronze tablet stamped "351 ALBANY 1903".....	351.684

ORANGE AND SULLIVAN COUNTIES.

GOSHEN, LACKAWAXEN, MONTICELLO, PORT JERVIS, AND WHITE LAKE QUADRANGLES.

The elevations in the following list are based upon elevations by the 1903 adjustment of various bench marks on the precise-level line Hancock to Poughkeepsie. The leveling was done in 1904 under the direction of Mr. W. O. Tufts, assistant topographer, by Mr. G. M. Dimmick, levelman. Standard bench marks are stamped with legend "1903 ADJ" in addition to figures of elevation.

GOSHEN QUADRANGLE.

BURNSIDE, WEST ALONG THE NEW YORK, ONTARIO AND WESTERN RAILWAY, TO CAMPBELL HALL, THENCE
SOUTHWEST ALONG THE ERIE RAILROAD, TO GOSHEN, THENCE SOUTHEAST TO GREYCOURT.

	Feet.
Campbell Hall, in brick foundation of Campbell Hall; bronze tablet stamped "408 ALBANY 1900".....	409.078
Kipps station, in foundation wall of residence of J. H. Kipps, south end of west face; aluminum tablet stamped "390 ALBANY 1903 ADJ".....	389.600
Goshen, in foundation wall of Episcopal Church, north end of west face; aluminum tablet stamped "439 ALBANY 1903 ADJ".....	438.794
Chester, in foundation wall of Methodist Church, center of south face; bronze tablet stamped "477 ALBANY 1903 ADJ".....	476.776
Greycourt, in face of north abutment of railroad bridge over highway; bronze tablet stamped "447 ALBANY".....	448.282

GREYCOURT, SOUTHWEST ALONG THE NEW YORK, SUSQUEHANNA AND WESTERN
RAILROAD, TO WARWICK, THENCE WEST ALONG HIGHWAY TO PINE ISLAND.

Lake station, in foundation wall of the residence of J. Halbut, center of east face; bronze tablet stamped "554 ALBANY 1903 ADJ".....	553.710
Warwick, in foundation wall of Methodist Church, north end of east face; aluminum tablet stamped "538 ALBANY 1903 ADJ".....	537.903
Edenville, in stone residence of J. E. Hotaling, east end of south face, 24 inches above ground; aluminum tablet stamped "473 ALBANY 1903 ADJ".....	473.217
Pine Island, in center of south face of brick railroad station, Pine Island division of the Erie Railroad; bronze tablet stamped "407 ALBANY 1903 ADJ".....	407.003

JOHNSON, NORTHEAST ALONG NEW YORK, SUSQUEHANNA AND WESTERN RAILROAD,
TO MIDDLETOWN.

Slate Hill, in foundation wall of the store of Ourling Bros., south end of west face; bronze tablet stamped "505 ALBANY 1903 ADJ".....	505.300
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PORT JERVIS QUADRANGLE.

PINE ISLAND, WEST ALONG HIGHWAY TO UNIONVILLE, THENCE NORTH ALONG THE
NEW YORK, SUSQUEHANNA AND WESTERN RAILROAD, TO JOHNSON.

	Feet.
Unionville, in foundation wall of Baptist Church, south end of east face; bronze tablet stamped "516 ALBANY 1903 ADJ".....	516.367
Westtown, in foundation wall of storage building of T. G. Clark, south end of west face; bronze tablet stamped "480 ALBANY 1903 ADJ".....	480.026
Johnson, in foundation wall of the feed store of Simpson & Manning, north end of east face; bronze tablet stamped "451 ALBANY 1903 ADJ".....	450.994

PORT JERVIS, SOUTHEAST ALONG HIGHWAY TO UNIONVILLE.

Greenville, in foundation wall of Methodist Church, south end of east face; aluminum tablet stamped "1043 ALBANY 1903 ADJ".....	1,043.210
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OTIS, ALONG HIGHWAY WEST TO CUDEBACKVILLE, THENCE NORTHWEST TO OAK-
LAND VALLEY.

Cuddebackville, in foundation wall of Methodist Church, south end of east face; aluminum tablet stamped "522 ALBANY 1903 ADJ".....	522.085
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MONTICELLO QUADRANGLE.

OAKLAND VALLEY, NORTHWEST TO FORESTBURG.

Oakland Valley, highway bridge over Neversink River, in ledge of rock 35 feet southeast of southeast corner; bronze tablet stamped "686 ALBANY 1903 ADJ".....	685.570
Hartwood, in stone residence of Willis Butler, north end of east face, 30 inches above ground; bronze tablet stamped "1275 ALBANY 1903 ADJ".....	1,275.457

WHITE LAKE QUADRANGLE.

FORESTBURG, SOUTH TO MONGAUP.

Forestburg, in foundation wall of Catholic Church, south end of east face; bronze tablet stamped "1241 ALBANY 1903 ADJ".....	1,240.525
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LACKAWAXEN QUADRANGLE.

Mongaup, top of north abutment of highway bridge over Mongaup Creek; bronze tablet stamped "503 ALBANY 1903 ADJ".....	503.031
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ST. LAWRENCE COUNTY.

BRIERHILL, CANTON, GOUVERNEUR, HOGANSBURG, MASSENA, OGDENSBURG, RED MILLS,
AND WADDINGTON QUADRANGLES.

The elevations in the following list are based upon the 1903 adjustment of elevations of bench marks established by precise leveling along St. Lawrence River under the direction of the United States Board of Engineers on Deep Waterways. For additional elevations on the Hogansburg quadrangle refer to "Precise leveling." The leveling was done in 1904 under the direction of Mr. C. C. Bassett, topographer, by Mr. G. M. Dimmick, levelman. Standard bench marks are stamped with the legend "ALBANY 1903 ADJ" in addition to the figures of elevations.

BRIERHILL QUADRANGLE.

OGDENSBURG, SOUTHWEST ALONG HIGHWAY TO EDWARDSVILLE, THENCE NORTH TO MORRISTOWN.

	Feet.
Ogdensburg, 4.5 miles south of, in water table of residence of Paul Velour, north end, east face; bronze tablet stamped "317 ALBANY 1903 ADJ".....	317.215
Ogdensburg, 8.93 miles south of, in foundation wall of residence of Alonzo Havens, center of east face; aluminum tablet stamped "390 ALBANY 1903 ADJ".....	389.916
Ogdensburg, 11.67 miles south of, 200 feet north of residence of Luther Bloodough, 150 feet north of highway, 100 feet northwest of highway sluice, in solid rock; bronze tablet stamped "302 ALBANY 1903 ADJ".....	301.488
Edwardsville, in foundation wall of Union Church, east end of south face; bronze tablet stamped "295 ALBANY 1903 ADJ".....	295.206

	Feet.
Edwardsville, 2.93 miles northwest of; 2.6 miles southeast of Morristown, in solid rock, 30 feet west of southwest corner of red schoolhouse and 54 feet northeast of intersection at four corners; bronze tablet stamped "300 ALBANY 1903 ADJ".....	300.227
Morristown, in foundation wall of stone warehouse, 79.5 feet from north side of United States custom-house; $\frac{1}{4}$ -inch bolt (Deep Waterways bench mark).....	271.288

OGDENSBURG QUADRANGLE.

OGDENSBURG, SOUTHEAST ALONG HIGHWAY TO HEUVELTON, THENCE NORTHEAST TO LISBON, THENCE NORTHWEST TO RED MILLS.

Ogdensburg, in west pier at mouth of Oswegatchie River, in United States light-house; $\frac{1}{4}$ -inch bolt (Deep Waterways P. B. M. D.).....	251.022
Ogdensburg, 3.8 miles south of, 50 feet east of track, 100 feet west of road, 23 feet south of private road, in rock; bronze tablet stamped "309 ALBANY 1903 ADJ".....	309.132
Heuvelton, in foundation wall of Presbyterian Church, east end of south face; bronze tablet stamped "315 ALBANY 1903 ADJ".....	315.188
Flockville, in foundation wall of Presbyterian parsonage, west end of north face; bronze tablet stamped "364 ALBANY 1903 ADJ".....	364.086
Lisbon, in foundation wall of Presbyterian Church, center of south face; bronze tablet stamped "357 ALBANY 1903 ADJ".....	357.696

HEUVELTON, SOUTH ALONG HIGHWAY 9 MILES, THENCE EAST 6 MILES TO DE KALB.

De Peyster, in foundation wall of Union Church, south end, east face; bronze tablet stamped "374 ALBANY 1903 ADJ".....	374.479
De Peyster, 3.56 miles south of, 101 feet northwest of corner of Thos. Towander's residence, 7 feet west of highway; tablet stamped "332 ALBANY 1903 ADJ".....	332.411
De Kalb, 0.9 mile northwest of, 600 feet southeast of residence of Horace Streeter, 50 feet north of center of highway; tablet in ledge, stamped "414 ALBANY 1903 ADJ".....	413.641

DE KALB, NORTH ALONG RAILROAD TO RENSSELAER FALLS, THENCE NORTHWEST TO HEUVELTON.

De Kalb, 4.17 miles north of, 300 feet northwest of highway crossing of the Rome, Watertown and Ogdensburg division of New York Central and Hudson River Railroad, 150 feet northeast of residence of Van Hunters, 100 feet north of center of track, in solid rock; aluminum tablet stamped "393 ALBANY 1903 ADJ".....	393.221
Rensselaer Falls, in water table of Methodist Church, south end of west face; aluminum tablet stamped "328 ALBANY 1903 ADJ".....	327.544

GOUVERNEUR QUADRANGLE.

AT DE KALB.

De Kalb, in foundation wall of church, center of south face; bronze tablet stamped "357 ALBANY 1903 ADJ".....	357.010
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RED MILLS QUADRANGLE.

RED MILLS, EAST ALONG HIGHWAY TO CHIPMAN.

Red Mills, 6.93 miles east of, in foundation wall of residence of Alvia Martin, west end of south face; bronze tablet stamped "348 ALBANY 1903 ADJ".....	348.175
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WADDINGTON QUADRANGLE.

CHIPMAN, SOUTHEAST TO MADRID.

Chipman, in foundation wall of Scotch Presbyterian Church, center of north face; bronze tablet stamped "355 ALBANY 1903 ADJ".....	354.953
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MADRID, NORTHEAST TO RAYMONDSVILLE.

Madrid, 3.95 miles north of, in foundation wall of residence of N. J. Abernathy, center of east face; bronze tablet stamped "349 ALBANY 1903 ADJ".....	348.942
Chases Mill (8 miles north of Madrid), in foundation wall of Hotel Creighton, center of south face; bronze tablet stamped "272 ALBANY 1903 ADJ".....	271.453

CANTON QUADRANGLE.

AT MADRID.

Madrid, in foundation wall of Methodist Church, center of east face; bronze tablet stamped "320 ALBANY 1903 ADJ".....	319.557
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MASSENA QUADRANGLE.

RICHARDS LANDING, SOUTH ALONG HIGHWAY TO MASSENA SPRINGS, THENCE EAST
ALONG THE GRAND TRUNK RAILWAY TO HELENA.

	Feet.
Richards Landing, 58.5 feet east of east face of Isaac Richards's residence, 3 feet north of south fence of river road, 13 feet underground; concrete base, in top of which is set a $\frac{1}{4}$ -inch round-head bolt (Deep Waterways P. B. M. 6).....	232.381
Massena, in northwest corner of Clark Block; bronze tablet stamped "205 ALBANY 1904".....	205.000
Massena Springs, 4.33 miles east of, in south end of east abutment of railroad bridge; bronze tablet stamped "193 ALBANY 1904".....	192.795

MASSENA SPRINGS, SOUTHWEST ALONG ROAD VIA RAYMONDVILLE, TO NORWOOD,
THENCE ALONG RAILROAD NORTHEAST, TO WINTHROP, THENCE ALONG
HIGHWAY NORTH-NORTHEAST VIA HELENA, TO HOGANSBURG.

Massena Springs, 2.75 miles southwest of, in foundation wall of north end of east face of brick house of Chas. Cahby (owned by Allen Ames), on highway leading from Massena Springs southwest to Raymondville; bronze tablet stamped "216 ALBANY 1904".....	216.063
Raymondville, in foundation wall of Union Church, 10 feet from north end of west face; bronze tablet stamped "251 ALBANY 1904".....	251.126
Norfolk, in foundation wall of Presbyterian Church, 12 feet south of north end of west face; aluminum tablet stamped "257 ALBANY 1904".....	256.937
Norwood, in foundation wall of Music Hall, north end of east face, 28 inches above ground; aluminum tablet stamped "330 ALBANY 1903 ADJ".....	330.017
Knapps, in foundation wall of residence of L. M. Maxfield, west end of south face; aluminum tablet stamped "360 ALBANY 1904".....	359.764
Knapps, 3.81 miles east of, in top of north end of east abutment of railroad bridge, 420 feet west of highway crossing; aluminum tablet stamped "345 ALBANY 1904".....	344.498
Winthrop, in foundation wall of Universalist Church, south end of east face; aluminum tablet stamped "337 ALBANY 1904".....	336.960
Winthrop, 2.96 miles north of, in foundation wall of schoolhouse, District No. 3, town of Brasher, south end of east face; aluminum tablet stamped "291 ALBANY 1903 ADJ".....	290.137
Brasher Center, in foundation wall of Methodist Church, east end of south face; aluminum tablet stamped "266 ALBANY 1903 ADJ".....	265.524

HOGANSBURG QUADRANGLE.

Helena, in north end of west abutment of Grand Trunk Railway bridge over St. Regis River; bronze tablet stamped "191 ALBANY 1904".....	190.807
Hogansburg, in foundation wall of St. Patrick's Church; $\frac{1}{4}$ -inch bolt (Deep Waterways P. B. M. P.).....	177.850

JEFFERSON AND ST. LAWRENCE COUNTIES.

ALEXANDRIA BAY, CLAYTON, THERESA, AND WATERTOWN QUADRANGLES.

The elevations published in the following list are based upon the latest adjustment heights of permanent bench marks established in the course of precise leveling under the United States Board of Engineers on Deep Waterways, at Clayton, Fishers Landing, Alexandria Bay, and Chippeway village, in the vicinity of Cape Vincent. The leveling was done in 1900 under the general direction of Mr. W. H. Lovell, topographer, by Mr. Wm. Kelley, levelman. The standard bench marks are stamped with the letters "CAPE VINCENT" in addition to figures of elevation which accord with the elevations as published by the board in 1903; the latter are approximately 1 foot higher than the accepted elevations herewith published.

CLAYTON QUADRANGLE.

CLAYTON, SOUTH VIA CLAYTON CENTER AND DEPAUVILLE, TO LIMERICK.

	Feet.
Clayton, southwest corner of Catholic Church, in water table; copper bolt.....	278.815
Clayton, James street, in front of Mrs. Linnell's residence, on back part of top of fire hydrant; copper bolt stamped "CAPE VINCENT 289".....	287.631
Clayton Center, residence of Merritt Lengenfelder, on west face of building at south corner in stone foundation wall; bronze tablet stamped "CAPE VINCENT 423".....	422.071
Depauville, at crossroads in east corner of stone foundation wall under residence of Ira Gillett; aluminum tablet stamped "299 CAPE VINCENT".....	297.525
Perch River, stone schoolhouse, in northeast corner of water table; bronze tablet stamped "338 CAPE VINCENT".....	336.950

LIMERICK, NORTHWEST VIA CHAUMONT, TO THREEMILE BAY.

	Feet.
Chaumont, Main street, in north face of buttress at northwest corner of Hiram Copley's stone office building; aluminum tablet stamped "295 CAPE VINCENT".....	293.425
Threemile Bay, Baptist Church, in southeast corner of foundation wall; aluminum tablet stamped "266 CAPE VINCENT".....	264.544

THREEMILE BAY, NORTH VIA ST. LAWRENCE, TO CLAYTON.

St. Lawrence, 225 feet north of crossroads, on east side of road, on large boulder; bronze tablet stamped "357 CAPE VINCENT".....	356.269
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CLAYTON, SOUTHEAST TO LAFARGEVILLE.

Clayton, north side of Water street, in limestone water table on west side 1.85 feet northerly from the southwest corner of the Barker brick building; aluminum tablet stamped "257 CAPE VINCENT".....	256.248
Clayton, 1.9 miles from, north end of west abutment of iron bridge on New York Central Railroad, northeast corner of top step; chiseled mark.....	325.49

LIMERICK, SOUTH TO DEXTER.

Dexter, brick schoolhouse, 2 feet easterly from northwest corner of main building, in limestone water table on north side; aluminum tablet stamped "326 CAPE VINCENT".....	324.395
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THERESA QUADRANGLE.

LIMERICK, EAST VIA BROWNVILLE, TO FELTS MILLS.

Brownville, in front of station; top of rail.....	324.8
Brownville, brick schoolhouse at five corners, midway of front building and 3.2 feet above surface of ground, in limestone foundation wall; bronze tablet stamped "355 CAPE VINCENT".....	354.243
Sanford, in front of station; top of rail.....	470.3
Felts Mills, bridge over North Branch of Black River, on east end of south abutment (Island abutment); bronze tablet stamped "583 CAPE VINCENT".....	582.456

FELTS MILLS NORTH TO EVANS MILLS (SINGLE-SPUR LINE).

Evans Mills, at southeast corner of crossroads, in north face of limestone building of Wesley Rulison (post-office building), 2.3 feet east of northwest corner; bronze tablet stamped "431 CAPE VINCENT" ^a	430.88
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LAFARGEVILLE, EAST TO THERESA.

Lafargeville, Orleans Hotel (stone building), in southeast corner; aluminum tablet stamped "381 CAPE VINCENT".....	380.461
Theresa, stone high school on Main street, in water table in north face and near northwest corner of belfry tower; aluminum tablet stamped "376 CAPE VINCENT".....	375.915

PERCH RIVER, NORTHEAST TO STONE MILL POST-OFFICE (SINGLE-SPUR LINE).

Stone Mill post-office, north side of limestone store and dwelling of John Irwin, about 2.6 feet west of northeast corner; bronze tablet stamped "359 CAPE VINCENT".....	358.293
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ALEXANDRIA BAY QUADRANGLE.

THERESA, NORTH TO REDWOOD, THENCE WEST TO ALEXANDRIA BAY.

Redwood, the Dollinger House (hotel), east side and northeast corner of foundation wall; aluminum tablet stamped "365 CAPE VINCENT".....	364.786
Alexandria Bay, Reformed Church, 29.9 feet north-northeast from the northwest corner, in ledge in church lot; aluminum tablet stamped "283 CAPE VINCENT".....	282.267

LAFARGEVILLE, NORTH VIA OMAR TO FISHERS LANDING.

Omar, 420 feet northerly from intersection of Fishers Landing and Collins Landing roads, in bed rock on sandstone ledge, west side of the Collins Landing road, and on line with northerly side of the Omar schoolhouse, and distant 51.62 feet from northwest corner of schoolhouse; bronze tablet stamped "297 CAPE VINCENT".....	295.745
Fishers Landing, crossroads near, 72.6 feet from the south corner of Mrs. Tom's residence and 131 feet northwest of the west corner of a house on the opposite side of the road; top of a round-headed $\frac{1}{4}$ -inch brass bolt cemented into bed rock 6 inches below surface of ground...	274.351

^a The elevation of this by line south from Theresa, discarded, is 1 foot lower, therefore above elevation may be 1 foot too great.

^b The letters "U. S. P. B. M. 29" are cut in the bed rock. This is a bench mark set by the Deep Waterways Commission.

REDWOOD, NORTH VIA SOUTH HAMMOND TO CHIPPEWA VILLAGE.

	Feet.
Chippewa Village, stone schoolhouse, District No. 11, 1 foot easterly from the northeast corner, set in bed rock; bronze tablet stamped "289 CAPE VINCENT".....	287.768
Chippewa Village, stone schoolhouse, District No. 11, north face of northeast corner; center-punch mark of a brass bolt (permanent bench mark C. V. of the Deep Waterways Commission).....	290.698

WATERTOWN QUADRANGLE.

BROWNVILLE, SOUTHEAST TO WATERTOWN (SINGLE-SPUR LINE).

Watertown, Arsenal street, State armory, front face, west end; aluminum tablet stamped "479 CAPE VINCENT".....	478.087
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JEFFERSON, LEWIS, OSWEGO, AND ONEIDA COUNTIES.

BOONVILLE, CARTHAGE, HIGHMARKET, KASOAG, MEXICO, ORWELL, PORT LEYDEN, PULASKI, AND TABERG QUADRANGLES.

The elevations in the following list are based upon the Gristmill bench mark, the elevation of which is accepted as 13.863 feet above mean sea level. The initial points upon which this group of levels depends are bench marks along the precise-level line Remsen to Limerick herein reported, to which refer for additional elevations on Boonville, Port Leyden, and Carthage quadrangles, and a Deep Waterways bench mark at Rome recovered by the Army Engineers' precise-level line of 1902.

The leveling on Port Leyden quadrangle was done partly in 1902 under the direction of Mr. J. H. Jennings by Mr. J. B. Maguire, levelman, but mostly in 1905 under the direction of Mr. J. I. Gayetty, assistant topographer, by Mr. R. P. Thompson, levelman; the work on the remainder of these quadrangles was done under the direction of Mr. J. H. Jennings as follows: On the Boonville quadrangle, in 1901, by Mr. A. S. Havens, levelman; on the Carthage, Highmarket, Orwell, Pulaski, and Taberg quadrangles, in 1902, by Mr. J. B. Maguire, levelman; on the Mexico and the part of the Kasoag quadrangle lying in Oswego County, in 1903, by Messrs. G. M. Dimmick and Geo. Seidel, levelmen; and the leveling in Oneida County on the Kasoag quadrangle, in 1904, by Mr. L. E. Tucker. The standard bench marks are stamped mostly with the letters "ALBANY" in addition to the figures of elevation, and in some cases the year. Those set in 1905 on Port Leyden quadrangle were stamped "ADJ 1903."

PORT LEYDEN QUADRANGLE.

GLENFIELD, EAST ALONG HIGHWAY TO HOUSEVILLE, THENCE SOUTH VIA TURIN TO CONSTABLEVILLE, THENCE SOUTHEAST TO BOONVILLE.

	Feet.
Houseville, 180 feet south of crossroads, in northeast corner of south abutment of highway bridge; aluminum tablet stamped "1304 ALBANY".....	1,304.024
Turin, at northwest corner in west side of building owned by J. E. Jones, 50 feet southeast from crossroads; bronze tablet stamped "1264 ADJ 1903".....	1,264.144
Turin, 2.9 miles south of, 250 feet east of house of S. S. Freeman, 150 feet south of house of C. D. Davis, at east side of three roads intersection, 4 feet east of fence, in large rock; bronze tablet stamped "1277 ADJ 1903".....	1,276.537
Constableville, in southeast corner in water table of Catholic Church; bronze tablet stamped "1260 ADJ 1903".....	1,259.926
Constableville, 3.4 miles southeast of, 175 feet west of road, 0.2 mile northwest of three corners and 1.20 miles southeast of four corners, in foundation wall, east face, north corner of barn owned by Carpenter; bronze tablet stamped "1191 ADJ 1903".....	1,190.281

PORT LEYDEN, NORTHEAST ALONG HIGHWAY TO FOWLerville, THENCE NORTHWEST TO BRANTINGHAM, THENCE WEST TO GLENFIELD.

Port Leyden, 3.1 miles northeast of, 30 feet north of center of road, 16 feet 8 inches southeast of pine tree, 17 feet 8 inches southwest of pine tree; iron post stamped "1207 ADJ 1903"....	1,206.965
Fowlerville, 50 feet north of northeast abutment of highway bridge over Moose River, 20 feet east of center of highway, in ledge of rock; aluminum tablet stamped "1182 ADJ 1903"....	1,181.594
Fowlerville, 3.6 miles northwest of, at Gridles Corners, 23 feet east of road to north, 26 feet north of east and west road, 32 feet from center of crossroads; iron post stamped "1226 ADJ 1903".....	1,225.959

	Feet.
Brantingham, in center of south face of foundation wall of T. Hess's barn, 250 feet west of four corners; aluminum tablet stamped "1259 ADJ 1903".....	1,259.296
Greig, 0.2 mile south of three corners, 150 feet west of house of L. D. Hires, 20 feet north from center of road, in flat rock; bronze tablet stamped "826 ADJ 1903".....	825.925
Glenfield, in foundation wall of New York Central and Hudson River depot; bronze tablet stamped "776 ALBANY 1900".....	777.639

BOONVILLE QUADRANGLE.

BOONVILLE, ALONG PUBLIC ROAD AND BLACK RIVER CANAL, VIA WEST LEYDEN, STOKES AND FRENCHVILLE, TO REMSEN.

West Leyden, steel bridge over Mohawk River, east abutment, top of north end; bronze tablet stamped "1493 ALBANY 1901".....	1,493.500
West Branch, steel bridge over West Branch of Mohawk River, south abutment, top of east end; bronze tablet stamped "1002 ALBANY 1901".....	1,001.800
Stokes, south entrance to hotel on northeast corner of crossroads, west end of lower step; chisel mark.....	634.68
Delta, steel bridge over Mohawk River, north of State dam, top of north end of east abutment; bronze tablet stamped "516 ALBANY 1901".....	516.160
Westerville, Canal Lock No. 16, southwest hollow quoin between anchors; copper bolt.....	587.622
Frenchville, Canal Lock No. 17, top of north end of west wall; copper bolt.....	595.473
Frenchville, steel bridge over creek, top of west end of south abutment; aluminum tablet stamped "593 ALBANY 1901".....	593.300
Steuben, church on northwest angle of crossroads, near southeast corner of south foundation wall; aluminum tablet stamped "932 ALBANY 1901".....	932.280

CARTHAGE QUADRANGLE.

LOWVILLE, WEST ALONG HIGHWAY TO GARDNERS CORNERS, THENCE NORTH VIA COPENHAGEN TO CHAMPION, THENCE EAST TO CARTHAGE.

Gardners Corners, about 5.2 miles east of, northwest corner of foundation of School No. 14 in Martins Township; bronze tablet stamped "1700 ALBANY".....	1,700.643
Gardners Corners, northwest corner of post-office and general store; bronze tablet stamped "1697 ALBANY".....	1,697.560
Copenhagen, highway bridge over Deer River in north wing of west abutment; aluminum tablet stamped "1174 ALBANY".....	1,174.462
Champion, 400 feet south of crossroads, west wall of culvert; bronze tablet stamped "1011 ALBANY".....	1,010.791

HIGHMARKET QUADRANGLE.

HOUSEVILLE, SOUTHEAST ALONG TRAIL AND HIGHWAY, TO CLEMENS CORNERS.

[The error distributed in this line is excessive.]

Wetmore, 1 mile southeast of, Page & Fairchild Company lumber camp No. 6, at upper end of tramway, in the north foundation wall of camp; bronze tablet stamped "2003 ALBANY".....	2,002.641
Michigan Mills (4 miles south of Page), at entrance to trail in woods, 250 feet north by 150 feet west of mill, in bowlder; bronze tablet stamped "1778 ALBANY".....	1,777.526
North Osceola (Clemens Corners), School No. 4, Osceola Township, in northeast corner of foundation wall; aluminum tablet stamped "1591 ALBANY".....	1,590.955

CLEMENS CORNERS, SOUTH TO OSCEOLA.

Osceola, southwest corner of foundation of general store and post-office; aluminum tablet stamped "1033 ALBANY".....	1,032.970
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HOOKER, NORTH TO GARDNERS CORNERS.

Hooker, 2 miles northeast of southeast corner of Jesse Marcellus farm, 10 feet west of fence and 325 feet north of creek at the Culpepper road, in bowlder; bronze tablet stamped "1758 ALBANY".....	1,756.827
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TABERG QUADRANGLE.

CAMDEN, SOUTHEAST ALONG RAILROAD, TO ROME.

Camden, southwest corner of water table of town hall; aluminum tablet stamped "520 ALBANY".....	519.966
Blossvale, I. J. White's store, opposite station, in southeast corner of foundation; aluminum tablet stamped "420 ALBANY".....	420.230

BLOSSVALE, NORTHEAST ALONG ROAD TO WEST LEYDEN.

	Feet.
Point Rock, in northwest corner of foundation of post-office and general store; bronze tablet stamped "1017 ALBANY".....	1,016.596
Point Rock, about 4 miles north of, West Leyden road, in northwest wall of Jacob Kirk's house, facing road; bronze tablet stamped "1493 ALBANY".....	1,492.340

ORWELL QUADRANGLE.

GREENBORO, EAST ALONG ROAD TO HOOKER.

Oswego-Lewis County line, 0.25 mile north of, in large bowlder on northwest side of road; aluminum tablet stamped "1696 ALBANY".....	1,695.582
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GREENBORO, WEST ALONG ROAD TO SMARTVILLE, THENCE SOUTH TO ALTMAR.

Greenboro, on State road at post-office, in face of east wall of culvert; bronze tablet stamped "1269 ALBANY".....	1,268.538
Orwell, northwest corner of crossroads, northeast corner of foundation of public fountains; bronze tablet stamped "810 ALBANY".....	809.587

CLEMENS CORNERS, WEST TO REDFIELD, THENCE NORTH TO GREENBORO.

Redfield, in north foundation of Methodist Church; aluminum tablet stamped "952 ALBANY".....	951.005
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GREENBORO, NORTH VIA HIGHWAY TO SCHOOL NO. 7, LORRAINE TOWNSHIP (SINGLE-SPUR LINE).

East Boylston, 1.1 miles north of, School No. 7, Lorraine Township, Jefferson County, west side of Greenboro-Lorraine road, in large bowlder; aluminum tablet stamped "1262 ALBANY".....	1,261.160
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FROM 3 MILES NORTHEAST OF ALTMAR, SOUTHEAST TO RICARD.

Ricard, 0.5 mile north of post-office, 0.1 mile south of Orwell-Williamston Township line, in front face of foundation of Armstrong's house on west side of road; bronze tablet stamped "759 ALBANY".....	758.729
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PULASKI QUADRANGLE.

Altmar (Sand Bank), southeast corner of foundation of Union Free School; aluminum tablet stamped "577 ALBANY".....	576.806
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KASOAG QUADRANGLE.

ALTMAR, SOUTH ALONG THE ROME, WATERTOWN AND OGDENSBURG RAILROAD, TO ROME.

Kasoag, 500 feet east of Rome, Watertown and Ogdensburg Railroad, northwest corner of foundation of post-office; aluminum tablet stamped "638 ALBANY".....	637.817
Williamstown, in west foundation wall of freight depot; bronze tablet stamped "603 ALBANY".....	602.550
West Camden, 150 feet east of railroad, in northwest corner of foundation of Foster's general store; bronze tablet stamped "542 ALBANY".....	541.784

CAMDEN, NORTH ALONG ROAD, TO OSCEOLA.

Florence, at intersection of State road and road to Osceola, southwest corner of the foundation of O'Mara's general store; bronze tablet stamped "974 ALBANY".....	973.826
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WEST AMBOY, ALONG HIGHWAY VIA AMBOY, TO WILLIAMSBURG.

West Amboy, in foundation wall of Union Church, east end of north face; aluminum tablet stamped "588 ALBANY 1903".....	587.989
Amboy, in foundation wall of Union Church, west end of south face; bronze tablet stamped "654 ALBANY 1903".....	654.158

CLEVELAND, NORTHEAST TO CAMDEN.

Elpis, in north wall of foundation of Methodist Church; bronze tablet stamped "571".....	571.236
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MEXICO QUADRANGLE.

VERMILION, EAST ALONG HIGHWAYS VIA MEXICO, UNION SQUARE, AND SOUTH ALBION, TO KASOAG.

	Feet.
Mexico, in foundation wall of pillar post of school building; aluminum tablet stamped "384 ALBANY 1903".....	384.059
Union Square, in foundation wall of residence of E. C. Parsons, center of north face; bronze tablet stamped "467 ALBANY 1903".....	467.454
South Albion, in foundation of cheese factory, south end of east face; bronze tablet stamped "645 ALBANY 1903".....	645.002

UNION SQUARE, SOUTH ALONG THE ROME, WATERTOWN AND OGDENSBURG RAILROAD, TO PARISH, THENCE EAST ALONG HIGHWAYS TO WEST AMBOY.

Parish; top of southeast corner of foundation wall of station.....	475.95
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PARISH, SOUTH ALONG THE ROME, WATERTOWN AND OGDENSBURG RAILROAD, TO CENTRAL SQUARE, THENCE EAST ALONG THE NEW YORK, ONTARIO AND WESTERN RAILWAY, TO CONSTANTIA.

Hastings, 1.2 miles west of station, in foundation wall of Presbyterian Church, south end of west face; aluminum tablet stamped "486 ALBANY" (bench mark on single-spur line) ..	486.355
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MADISON, ONONDAGA, AND OSWEGO COUNTIES.

CAZENOVIA, CHITTENANGO, MORRISVILLE, SYRACUSE, AND TULLY QUADRANGLES.

The elevations in the following list result from a readjustment of leveling reported upon in the Appendixes to the Nineteenth and Twenty-first Annual Reports of the Director of the United States Geological Survey, with a few additional elevations.

The leveling was done as follows: On Tully and most of Syracuse and Chittenango quadrangles, in 1897, under Mr. C. C. Bassett, topographer, by Mr. Clark Brown, levelman; the remainder on north edge of Syracuse and Chittenango quadrangles was done in 1902 under Mr. Jennings, topographer, by Mr. J. B. Maguire, levelman; the leveling on Cazenovia quadrangle was done in 1897 under Mr. A. M. Walker, topographer, by Mr. Brown; that on Morrisville quadrangle was done partly in 1898 under Mr. Jennings, by Mr. Brown, partly in 1899 under Mr. Walker by Messrs. W. W. Gilbert and A. W. Gill, levelmen, and completed in 1904 under Mr. Jennings by Mr. G. M. Dimmick, levelman; and that on Oneida quadrangle was done under Mr. Walker by Messrs. Gilbert and Gill. The standard bench marks set prior to 1898 were stamped "S," referring to Syracuse, with figures of elevation 1 foot too low, while those set later were referred to Albany and stamped "ALBANY," in addition to the figures of elevation.

SYRACUSE QUADRANGLE.

SYRACUSE, SOUTH TO EAST ONONDAGA.

	Feet.
Syracuse, at Weigh lock, canal collector's office, at right of west entrance door; in water table, bronze tablet stamped "404 S".....	404.320
Syracuse, Geddes Street Bridge No. 90, pier at foot of west towpath stairs, at southwest corner of stairway landing; copper plug (State engineer's bench mark No. 305).....	406.230
Syracuse, station of Delaware, Lackawanna and Western Railroad; top of rail.....	389.3
Syracuse, West Colvin street bridge over Onondaga Creek, north end of west abutment, northwest corner of top stone; chiseled square.....	405.54
Syracuse, northeast corner of South Salina street and Matson avenue, on stone monument; chiseled cross.....	418.31
East Onondaga, northwest wing of bridge over Onondaga Creek, in coping; copper bolt stamped "S 422".....	422.129

ORAN, NORTHWEST TO LIMESTONE AQUEDUCT.

Manlius, 1.5 miles northwest of, at High Bridge (double-arch), over Limestone Creek, in coping 5 feet from end of southwest wing; copper bolt stamped "S 507".....	507.550
Erie Canal, Limestone Creek Aqueduct, southwest coping parapet on west wing, towpath side; copper bolt (State engineer's bench mark No. 286).....	434.207

AT CONSTANTIA.

Constantia, road crossing at station; top of rail.....	394
Constantia, northwest corner of foundation of Presbyterian Church; bronze tablet stamped "389 ALBANY 1903".....	389.508

TULLY QUADRANGLE.

EAST ONONDAGA, SOUTH UP ONONDAGA VALLEY TO TULLY.

	Feet.
Onondaga Castle, 30 feet north of hotel, 30 feet east of road, on well curb; chiseled square.....	519. 83
Onondaga Indian Village, 0.25 mile south of road leading to South Onondaga, 900 feet south of cemetery and 40 feet south of small brook, in boulder 3 feet from west road fence; copper bolt stamped "S 469".....	468. 705
Solvay water tank, west side of road, opposite tank; chiseled square on north side of rim of valve casing.....	567. 57
Cardiff, 0.12 mile east of road, back of hotel, 75 feet south of brook, boulder 6 feet broad and 2 feet high; copper bolt stamped "S 676".....	676. 192
Tully Center, 1.5 miles north of, 700 feet north of road west to Vesper, 500 feet south of curve in road, on boulder in southwest corner of barnyard, west side of road; copper bolt stamped "S 819".....	819. 617
Tully, 200 feet north of Hotel Slayton, in water table of brick house on west side of road, at southeast corner of front of house; bronze tablet stamped "1251 S".....	1,251. 670

TULLY, NORTH TO JAMESVILLE, THENCE WEST TO EAST ONONDAGA.

Apulia station, 1 mile north of, on road to Syracuse, 500 feet north of white house on west side of road, 125 feet north of road summit; copper bolt in boulder, stamped "1292 S".....	1,292. 510
Onativia (0.8 mile east of Lafayette), engine water column at railway station; top of anchor bolt in northwest corner of base plate.....	992. 25
Jamesville, 0.75 mile south of, at east end of reservoir dam, in coping; cross mark on bronze tablet stamped "S 645".....	645. 493

CAZENOVIA QUADRANGLE.

APULIA, EAST TO FABIUS.

Fabius, 100 feet west of crossroads, Main and Cemetery streets, in wall under west window of flat-roofed frame house; tablet stamped "1284 S".....	1,284. 670
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FABIUS, NORTHEAST TO DELPHI, THENCE NORTH TO ORAN.

Oran, 1.5 miles southeast of, 1.5 miles southeast of railroad crossing of Cherry Valley turnpike, 500 feet northwest of rock cut, on north coping of cattle pass; chiseled square.....	1,092. 08
Oran, 300 feet west of church, 20 feet north of road, copper bolt in prominent boulder; stamped "S 793".....	793. 678

FABIUS, SOUTH VIA KEENEY, TO CUYLER.

Fabius, 1.75 miles south of, east end of south abutment of iron bridge; chiseled square.....	1,229. 79
Keeney, 500 feet east of schoolhouse, northeast wing of iron bridge, top stone; chiseled square.....	1,209. 31
Cuyler, 1 mile northeast of, near end of northeast wing of iron bridge over Tioughnioga River; chiseled square.....	1,206. 31

CUYLER, NORTH VIA DERUYTER, TO DERUYTER RESERVOIR.

Deruyter, foundation of water tank, in coping, side next to track; iron bolt.....	1,284. 70
Deruyter reservoir dam, west end of, south parapet of spillway arch, east end, face corner of coping; copper bolt stamped "1286 S".....	1,286. 618

DERUYTER, NORTHEAST TO SHEDS CORNERS, THENCE EAST TO NEAR GEORGETOWN,
THENCE NORTH TO ERIEVILLE.

Deruyter, 2.5 miles north of by 0.5 mile east of, railroad bench mark No. 92, reservoir road, opposite old sawmill, south parapet of railroad culvert; iron bolt set in lead.....	1,319. 110
Sheds Corners station, 600 feet south of, Tioughnioga River railroad bridge, north abutment, west end parapet; iron bolt set in cement (railroad bench mark No. 94).....	1,386. 053
Sheds Corners station, 600 feet south of, railroad bridge over Tioughnioga River, bridge seat, west end of south abutment; copper bolt stamped "1383 S".....	1,384. 360
Georgetown, 1.5 miles west of, on road to Sheds Corners, 75 feet north of road to Erieville, 20 feet north of brook, 15 feet west of road, 4 feet east of road fence; iron post stamped "S 1538".....	1,538. 754
Erieville, railroad bridge over road south of, on top stone, south end west abutment; chiseled square.....	1,619. 10

ERIEVILLE, NORTH VIA NELSON TO FENNER, THENCE SOUTHWEST TO CAZENOVIA,
THENCE NORTHWEST TO ORAN.

Erieville, reservoir gatehouse, 6 feet west of door, in projection of bottom course; copper bolt stamped "1473 S".....	1,474. 117
Nelson, 500 feet south of crossroads, on face corner of bottom stone, east end of north abutment of bridge; chiseled square.....	1,432. 24

	Feet.
Fenner, 1 mile south of, 1,000 feet north of Peterboro turnpike, 150 feet south of orchard, 75 feet west of road, in outcrop; copper bolt stamped "1466 S".....	1,467.544
Cazenovia, 942 feet south of Lehigh Valley Railroad station; iron pin in northwest corner of north abutment (railroad bench mark No. 103).....	1,187.713
Cazenovia, south entrance of chapel building of seminary, water table under pilaster at east side of door; bronze tablet stamped "S 1246".....	1,247.392
Cazenovia, West Shore Railroad pumping station, foundation of water tank, north pedestal next to track; chiseled square.....	1,196.99
Cazenovia, 2 miles northwest of West Shore Railroad station; highest point of stone monument over tunnel, 40 feet north of road.....	1,265.14

CHITTENANGO QUADRANGLE.

CANASTOTA, SOUTH VIA PERRYSVILLE TO FENNER.

Canastota, Peterboro Street Bridge over Erie Canal, east wing of towpath abutment; fourth step (old canal bench mark No. 52).....	433.89
Canastota, 0.5 mile south of New York Central and Hudson River Railroad station; iron bolt in culvert coping (Lehigh Valley Railroad bench mark No. 118).....	457.406
Clockville, 400 feet south of, 15 feet east of track; water-pipe valve case south edge of bell (Lehigh Valley Railroad bench mark No. 116).....	645.79
Cotton, 0.4 mile southwest of station, culvert for farm crossing on north side of track; iron bolt in coping (Lehigh Valley Railroad bench mark No. 114).....	758.016
Perryville, crossroads, new schoolhouse on site of old church, corner to right of front entrance, in stone foundation; tablet stamped "1103 ALBANY".....	1,103.431

CONSTANTIA, EAST TO CLEVELAND.

Cleveland, opposite station, west end of concrete wall; bronze tablet stamped "416 ALBANY 1903".....	416.504
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MORRISVILLE QUADRANGLE.

FENNER, EAST ALONG HIGHWAY TO PETERBORO, THENCE SOUTH VIA MORRISVILLE TO GEORGETOWN, THENCE NORTHWEST TO ERIEVILLE.

Peterboro, side of schoolhouse, 15 feet from rear corner, in stone foundation; tablet stamped "1320 ALBANY".....	1,321.183
Morrisville, front of county jail, 7 feet from west corner, in stone foundation; tablet stamped "1325 ALBANY".....	1,326.259
Morrisville station, north line of; top of rail.....	1,225.84
West Eaton, front of schoolhouse, right of entrance, 1 foot from corner; in stone foundation; tablet stamped "1395 ALBANY".....	1,395.675

GEORGETOWN STATION, EAST TO EARLVILLE.

Georgetown station, 1.75 miles southeast of, 10-foot span bridge over stream, north end of east abutment, 2.5 feet below top; iron bolt.....	1,493.92
Lebanon, 50 feet north of station, east of street, in foundation wall near southwest corner store; tablet stamped "1346 ALBANY".....	1,345.997

EARLVILLE, NORTH TO BOUCKVILLE, THENCE WEST TO MORRISVILLE.

Hamilton, Hamilton Bank building, in water table, 2 feet west of northeast corner; aluminum tablet stamped "1126 ALBANY".....	1,126.038
Hamilton, 1 mile north of; top of northwest corner of east abutment of railroad bridge over old canal.....	1,126.91
Bouckville, north side of stone building occupied by Coc & Brockett's store, 2 feet above ground, 1 foot west of northeast corner; aluminum tablet stamped "1149 ALBANY".....	1,149.634

EARLVILLE, NORTHEAST TO POOLVILLE.

Poolville, in foundation wall of milk station, east end of south face; bronze tablet stamped "1098 ALBANY 1903 ADJ".....	1,098.566
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MORRISVILLE, NORTH TO DURHAMVILLE.

Munnsville, Dexter & Davis's building used as store and post-office, in south side of stone foundation, 15 feet east of southwest corner; aluminum tablet stamped "679 ALBANY".....	679.661
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BROOME, CHENANGO, CORTLAND, AND MADISON COUNTIES.

APALACHIN, BINGHAMTON, CORTLAND, COVENTRY, GREENE, HARFORD, NINEVEH, NORWICH, PITCHER, AND SIDNEY QUADRANGLES.

The elevations in the following list are based upon the 1903 adjustment. The leveling was done under the direction of Mr. J. H. Jennings, as follows: On Sidney and Norwich and on part of Oxford quadrangles, in 1900, by Mr. C. H. Semper, levelman, and the remainder of all in 1900 by Mr. W. E. Green, levelman, except lines to Smithfield Flat on Greene quadrangle in 1902, by Mr. C. W. Marvin, and the work on Nineveh quadrangle, which was done in 1902 by Mr. J. B. Maguire, levelman. The standard bench marks are stamped "ALBANY" in addition to the figures of elevation.

APALACHIN QUADRANGLE.

FLEMINGSVILLE, NORTH ALONG HIGHWAY TO SPEEDVILLE.

	Feet.
Weltonville, highway bridge, southwest corner of south abutment; bronze tablet stamped "930 A".....	931.136

OWEGO, VIA THE LEHIGH VALLEY RAILROAD TO NEWARK VALLEY.

Flemingville, waiting room at station; top of doorsill.....	907.23
Newark Valley, 900 feet south of station, at northwest corner of iron Bridge No. 299 A, on abutment; bronze tablet stamped "961 A".....	961.634
Newark Valley, waiting room at station; doorsill.....	967.03

UNION, NORTH ALONG HIGHWAY, TO MAINE (SINGLE-SPUR LINE).

Union, Duane street crossing west of station; top of rail.....	833.3
Union Center, Andrew & Pitcairn's store, northwest side of; mark on water table.....	879.82
Maine, northwest corner of Methodist Episcopal Church; aluminum tablet stamped "915 ALBANY".....	916.700

UNION, SOUTH ALONG HIGHWAY, TO VESTAL CENTER (SINGLE-SPUR LINE).

Union, southwest corner of Union Methodist Episcopal Church; bronze tablet stamped "830 ALBANY".....	830.751
Vestal, at Delaware, Lackawanna and Western Railroad station, road crossing; top of rail..	828.7
Vestal Center, 975 feet east of, in northeast corner of abutment of iron highway bridge over Big Chocount Creek; bronze tablet stamped "985 ALBANY".....	985.274

BINGHAMTON QUADRANGLE.

KIRKWOOD, WEST TO HAWLEYTON (SINGLE-SPUR LINE).

Hawleyton, northeast corner of Methodist Episcopal Church; bronze tablet stamped "1277 ALBANY".....	1,277.314
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BINGHAMTON TO WEST CHENANGO (SINGLE-SPUR LINE).

West Chenango, Abbot Methodist Episcopal Church, in southeast corner of wall; bronze tablet stamped "1387 ALBANY".....	1,388.018
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BINGHAMTON, NORTH ALONG DELAWARE, LACKAWANNA AND WESTERN RAILROAD, TO CHENANGO FORKS.

Chenango Bridge, in front of station; top of rail, south-bound track.....	886.7
Chenango Forks, 0.1 mile north of Delaware, Lackawanna and Western station, iron highway bridge across Tioughnioga River, in southwest abutment, northwest wing, end stone of top course; bronze tablet stamped "— ALBANY".....	897.457

NINEVEH QUADRANGLE.

HARPERSVILLE, SOUTH ALONG THE DELAWARE AND HUDSON RAILROAD, TO LANESBORO, PA.

Harpersville, 1,250 feet west of, southwest corner of coping stone of abutment of iron trestle bridge No. 97; bronze tablet stamped "1051 ALBANY".....	1,049.041
Centreville, in front of station; top of rail.....	966.5
East Windsor, in front of station, top of rail.....	988.2
Windsor, in south wall at southeast of foundation of Presbyterian Church; bronze tablet stamped "972 ALBANY".....	972.917

*Set by party under State engineer, as substitute for former one in vicinity which was removed.

	Feet.
Stateline, 1 mile north of post-office, east side of river road, east side of river, at School No. 14, Windsor Township, in northwest corner of foundation of W. W. Watrous's house; bronze tablet stamped "960 ALBANY".....	961.147

GREENE QUADRANGLE.

CHENANGO FORKS, NORTHEAST ALONG THE DELAWARE, LACKAWANNA AND WESTERN RAILROAD, TO GREENE.

Willard, in front of station; top of rail.....	901.0
Greene, Main street crossing; top of rail.....	916.1
Greene, town hall, in foundation stone under middle column; bronze tablet stamped "923 ALBANY".....	923.910
Greene, waiting room at station; doorsill.....	917.25

CHENANGO FORKS, NORTHWEST ALONG DELAWARE, LACKAWANNA AND WESTERN RAILROAD, TO LISLE.

Barker, road crossing near station; top of rail.....	937.6
Barker, northwest corner of abutment of highway bridge; bronze tablet stamped "934 ALBANY".....	934.192
Whitney Point, waiting room at station; doorsill.....	956.26
Whitney Point, at road crossing north of station; top of rail.....	955.9

EAST PHARSALIA, SOUTHWEST TO SMITHVILLE FLATS (SINGLE-SPUR LINE).

McDonough, east foundation wall of Emanuel Baptist Church, 3 feet from southeast corner; aluminum tablet stamped "1418 ALBANY".....	1,418.666
Smithville Flats, in stone foundation of Presbyterian Church, 1 foot west of southeast corner; bronze tablet stamped "1033 ALBANY 1902".....	1,033.997

LISLE, NORTH ALONG HIGHWAY, TO CINCINNATUS.

Willett, southeast corner of foundation wall of Hotel Ingall; bronze tablet stamped "1039 ALBANY".....	1,039.527
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SIDNEY QUADRANGLE.

SIDNEY, NORTHWEST ALONG THE NEW YORK, ONTARIO AND WESTERN RAILWAY, TO GUILFORD.

New Berlin Junction, north side of station at railroad crossing; top of east rail.....	1,084.4
Parker, at road crossing near station; top of rail.....	1,423.0
Guilford, at road crossing by station; top of rail.....	1,520.6
Guilford, northwest corner of Episcopal Church, front face; aluminum tablet stamped "1511 ALBANY".....	1,511.722

COVENTRY QUADRANGLE.

GUILFORD, ALONG THE NEW YORK, ONTARIO AND WESTERN RAILWAY, TO NORWICH.

Summit, in front of station; top of rail.....	1,623.0
Oxford, at road crossing near station; top of rail.....	1,399.1

AFTON, NORTH ALONG HIGHWAY, TO COVENTRYVILLE (SINGLE-SPUR LINE).

Coventryville, Wm. Lyman's store, 8 feet from northeast corner, in foundation wall; aluminum tablet stamped "1435 ALBANY".....	1,435.291
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GREENE, NORTHEAST ALONG THE DELAWARE, LACKAWANNA AND WESTERN RAILROAD, TO OXFORD.

Brisbin, 500 feet west of station, in north end of east abutment of highway bridge over Chenango River; bronze tablet stamped "927 ALBANY".....	927.277
Coventry, waiting room at station; doorsill.....	959.00
Oxford, Water street crossing; top of rail.....	969.5
Oxford, waiting room at station; doorsill.....	971.93
Oxford, southeast corner of Citizens' Opera House, in foundation wall; aluminum tablet stamped "982 ALBANY".....	982.402

NORWICH QUADRANGLE.

NORWICH, NORTH ALONG THE DELAWARE, LACKAWANNA AND WESTERN RAILROAD,
TO EARLVILLE.

Feet.

Norwich, at Main street crossing of the Delaware, Lackawanna and Western Railroad; top of rail.....	1,006.7
Norwich, southeast corner of county court-house, on Broad street, in foundation wall; aluminum tablet stamped "1015 ALBANY 1900".....	1,015.216
Galena, North Norwich, at railroad crossing near station; top of rail.....	1,030.8
Galena (North Norwich post-office), culvert of the New York, Ontario and Western Railway, east side of top of north abutment; bronze tablet.....	1,023.181
Earlville, in brickwork of schoolhouse, 1 foot to right of front door; tablet stamped "1100 ALBANY".....	1,100.295

NORWICH, NORTHWEST VIA PLYMOUTH AND OTSELIC, TO GEORGETOWN STATION.

Beaver Meadow, in north face of Methodist Church; bronze tablet stamped "1484 ALBANY 1900".....	1,483.869
Otsellic, 500 feet east of hotel, west side of iron highway bridge, on top of south abutment; aluminum tablet stamped "1331 ALBANY 1900".....	1,331.035

SOUTH PLYMOUTH, ALONG HIGHWAYS WEST TO NORTH PHARSALIA, THENCE SOUTH TO
EAST PHARSALIA (SINGLE-SPUR LINE).

East Pharsalia, southeast corner of wall to chapel, 1,000 feet south of hotel; bronze tablet stamped "1557 ALBANY 1900".....	1,557.240
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PITCHER QUADRANGLE.

SOLON, SOUTHEAST ALONG THE ERIE AND CENTRAL NEW YORK RAILROAD, TO WILLETT.

East Freetown, at road crossing; top of rail.....	1,323.6
Reubens (milk station); top of rail.....	1,227.3
Whites Mills, in front of station; top of rail.....	1,169.6
Dutch Hill, road crossing; top of rail.....	1,131.49

CINCINNATUS, NORTHEAST ALONG HIGHWAY, TO OTSELIC.

Cincinnati, in northeast corner of brick building of J. W. Osgood, opposite hotel; bronze tablet stamped "1045 ALBANY".....	1,044.756
North Pitcher, west side of highway, in foundation wall of post-office; bronze tablet stamped "1166 ALBANY".....	1,166.612

PITCHER, NORTH TO LINCKLAEN (SINGLE-SPUR LINE).

Lincklaen, at west corner of First Congregational Church, in front wall; bronze tablet stamped "1192 ALBANY".....	1,192.683
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TRUXTON, NORTHEAST ALONG THE LEHIGH VALLEY RAILROAD, TO CUYLER.

Cuyler, 0.25 mile east of, 500 feet east of north and south road, 4 feet south of track, in bowlder; copper bolt stamped "1256 S".....	1,257.305
Cuyler, at road crossing near station; top of rail.....	1,127.1

HARFORD QUADRANGLE.

LISLE, NORTHWEST ALONG THE DELAWARE, LACKAWANNA AND WESTERN RAILROAD,
TO MESSENGERVILLE.

[The error distributed in this line is excessive.]

Lisle, 100 feet north of station, at road crossing; top of rail.....	972.4
Lisle, southeast corner of schoolhouse No. 1; bronze tablet stamped "975 ALBANY".....	975.166
Killawog, waiting room at station; doorsill.....	1,001.03
Marathon, Main street crossing; top of rail.....	1,041.3
Marathon, waiting room at station; top of rail.....	1,043.0
Marathon, 1.5 feet from northwest corner of Peck Memorial Library, in water table; bronze tablet stamped "1019 ALBANY".....	1,019.821
Messengerville, at road crossing near milk station; top of rail.....	1,055.7
Messengerville, road crossing near station; top of rail.....	1,055.6

MAINE, NORTH TO NANTICOKE (SINGLE-SPUR LINE).

	Feet.
Nanticoke, at north corner of house of Mrs. Mary Councilman, in foundation wall; aluminum tablet stamped "1100 ALBANY".....	1,101.044

NEWARK VALLEY, NORTH ALONG THE LEHIGH VALLEY RAILROAD, TO POINT 4 MILES SOUTH OF DRYDEN.

Berkshire, in front of station; top of rail.....	1,042.7
Berkshire, Methodist Episcopal Church, north side of west or front entrance; bronze tablet stamped "1055 A".....	1,055.658
Berkshire, 0.2 mile north of, at crossing near milk station; top of rail.....	1,046.1
Richford, waiting room at station; doorsill.....	1,100.02
Richford, at road crossing near station; top of rail.....	1,098.6
Richford, 0.1 mile north of Lehigh Valley Railroad station; bench mark under water tank, on southwest foundation stone.....	1,100.34
Harford Mills, waiting room at station; doorsill.....	1,152.44
Harford, waiting room at station; doorsill.....	1,185.62
Harford, in north front of Harford Methodist Episcopal Church; aluminum tablet stamped "1196 A".....	1,195.861

CORTLAND QUADRANGLE.

MESSENGERVILLE, NORTHWEST ALONG THE DELAWARE, LACKAWANNA AND WESTERN RAILROAD, TO CORTLAND.

Blodgett Mills, at road crossing near station; top of rail.....	1,082.9
Blodgett Mills, 1,000 feet north of station, on west side of track, in retaining wall; bronze tablet stamped "1086 ALBANY".....	1,086.336

MESSENGERVILLE, WEST ALONG HIGHWAY TO VIRGIL (SINGLE-SPUR LINE).

Virgil, northeast corner stone of Methodist Episcopal Church; bronze tablet stamped "1421 ALBANY".....	1,421.249
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CORTLAND, SOUTHEAST ALONG THE ERIE AND CENTRAL NEW YORK RAILROAD, TO SOLON.

McGrawville, South street crossing; top of rail.....	1,150.2
Maybury, switch at flag station; top of rail.....	1,247.7
Solon, crossing at milk station; top of rail.....	1,311.4
Solon, in northwest corner wall of William Corcoran's house; bronze tablet stamped "1308 ALBANY".....	1,308.000

CORTLAND, NORTHEAST ALONG THE LEHIGH VALLEY RAILROAD, TO TRUXTON.

Lorrings (flag station), at road crossing; top of rail.....	1,105.9
East River (flag station), at road crossing; top of rail.....	1,132.8
East Homer, in front of station; top of rail.....	1,132.3
East Homer, waiting room at station; doorsill.....	1,134.29
Truxton, waiting room of station; doorsill.....	1,156.78
Truxton, in front of station; top of rail.....	1,154.7
Truxton, corner of Methodist Episcopal Church; bronze tablet stamped "1159 ALBANY".....	1,159.096

ITHACA JUNCTION, NORTH ALONG THE DELAWARE, LACKAWANNA AND WESTERN RAILROAD, TO TULLY.

Cortland, waiting room at station; doorsill.....	1,114.22
Cortland, State Normal School building, north side of east entrance; aluminum tablet stamped 1122 "ALBANY".....	1,121.855
Homer, James street crossing; top of rail.....	1,132.9
Homer, waiting room at station; doorsill.....	1,132.82
Little York, at road crossing; top of rail.....	1,162.0
Preble, at road crossing; top of rail.....	1,188.3
Preble, Presbyterian Church, in southeast corner of wall; bronze tablet stamped "1212 ALBANY".....	1,212.554

CORTLAND, ALONG THE LEHIGH VALLEY RAILROAD, TO M'LEAN.

Cortland, Lehigh Valley station; waiting-room doorsill.....	1,130.32
McLean, E. G. Galloup's store, on east side of wall; chiseled cross.....	1,119.74

CAYUGA, CHEMUNG, ONONDAGA, TIOGA, AND TOMPKINS COUNTIES.

AUBURN, DRYDEN, MORAVIA, OWEGO, SKANEATELES, AND WAVERLY QUADRANGLES.

The elevations in the following list result from a readjustment of leveling reported upon in the Appendixes to the Eighteenth and Twentieth Annual Reports of the Director, United States Geological Survey, with additional work on Owego quadrangle. Leveling done by the Lehigh Valley Railroad was employed extensively in the readjustment. For additional elevations on Owego and Waverly quadrangles see "Precise leveling."

The leveling on Auburn, Skaneateles, and Moravia quadrangles was done in 1896 under the direction of Mr. J. H. Jennings, topographer, mostly by Mr. A. B. Pomme, levelman; that on Waverly and Dryden and part of Owego quadrangles was done in 1898 under the direction of Mr. R. D. Cummin, topographer, by Mr. W. W. Gilbert, levelman, and the remainder on the Owego quadrangle was done in 1900 under the direction of Mr. Jennings by Mr. W. E. Green, levelman. The standard bench marks on Waverly, Dryden, and Owego quadrangles are stamped "ALBANY" or "A" in addition to figures of elevation, mostly 1 foot too low. Those set in 1896 have no datum letter and the elevations stamped are mostly 2 feet too high on Auburn and Moravia quadrangles and 3 feet too high on Skaneateles quadrangle, but the corrected elevations given on the latter quadrangle are possibly 1 foot low, though the nearest of two connections which differed by that amount was taken.

OWEGO QUADRANGLE.

OWEGO, NORTH ALONG RAILROAD TO GRIDLEYVILLE.

	Feet.
Owego, in northwest corner of foundation wall of court-house; aluminum tablet stamped "818 ALBANY".....	818.387
Catatunk, at road crossing into sawmill yard; top of rail.....	849.8
Candor, at road crossing south of station; top of rail.....	892.8
Gridleyville, 0.3 mile south of, Bridge No. 10, in northeast pedestal stone; bronze tablet stamped "919 ALBANY".....	919.464
Gridleyville, at road crossing; top of rail.....	928.4

OWEGO, SOUTH ALONG HIGHWAY TO GIBSON CORNERS.

Owego, Main street road crossing; top of rail.....	807.8
Kile triangulation station, 2.8 miles south of Owego; top of stone monument.....	1,280.349
Gibson Corners, 1.5 feet from south end of schoolhouse, in west side wall; bronze tablet stamped "1531 ALBANY".....	1,531.558

SPENCER, SOUTH TO HALSEY VALLEY (SINGLE-SPUR LINE).

Halsey Valley, northwest corner of Dr. H. P. Vosburgh's house; bronze tablet stamped "1065 ALBANY".....	1,065.618
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VAN ET TEN, EAST ALONG THE LEHIGH VALLEY RAILROAD, TO NORTH CANDOR.

Spencer, Lehigh Valley Railroad crossing; top of rail.....	999.9
Spencer, southwest corner of Main and Tioga streets, in water table on north side of Fisher Block, 1 foot east of northwest corner; bronze tablet stamped "A 995".....	995.395
East Spencer, Lehigh Valley Railroad station; top of rail.....	986.3
West Candor, Lehigh Valley Railroad station; top of rail.....	955.9
North Candor, Lehigh Valley Railroad station; top of rail.....	948.7

WAVERLY QUADRANGLE.

WELLSBURG, NORTH ALONG HIGHWAY TO BRESFORT, THENCE EAST ALONG THE LEHIGH VALLEY RAILROAD, TO ERIN, THENCE NORTH TO PARK, THENCE SOUTHEAST TO VAN ET TEN, THENCE SOUTH TO WAVERLY.

Breesport, county buildings, on west face of foundation of brick structure, 3 feet above ground and 25 feet south of northwest corner, between second and third cellar windows; aluminum tablet stamped "A 1160".....	1,160.580
Erin station, Lehigh Valley Railroad; chiseled mark on top of foundation, 6 feet south of northeast corner.....	1,247.56
Erin station, in front of east line of; top of rail.....	1,247
Park station, south side of water tank; iron pin in foundation (Lehigh Valley Railroad bench mark).....	1,500.39

	Feet.
Park station, at highway crossing; top of rail.....	1,506.5
Park station, 1 mile east of, on Lehigh Valley Railroad; iron pin in top at center of east abutment of trestle (Lehigh Valley Railroad bench mark No. 18).....	1,391.84
Park station, 1.75 miles east of, on Lehigh Valley Railroad; iron pin in top of south end of east abutment of trestle (Lehigh Valley Railroad bench mark No. 19).....	1,304.57
Swartwood, east corner of water tank; iron pin in foundation (Lehigh Valley Railroad bench mark No. 21).....	1,053.60
Swartwood, in front of station, opposite north line; top of rail.....	1,053.3
Swartwood, front of residence of Benjamin Barnes, center of foundation, north wing; aluminum tablet stamped "A 1054".....	1,054.479
Van Etten, Warner street crossing of Lehigh Valley Railroad, Elmira and Cortland branch; top of rail.....	1,005.69
Van Etten, southeast corner of Waverly and Warner streets; water table at northwest corner of new brick building.....	1,018.84
Van Etten Junction, crossing of Elmira, Cortland and Northern division of Lehigh Valley Railroad; top of rail.....	992.2
Van Etten Junction, 0.87 mile south of, southeast abutment of iron highway bridge over Cayuta Creek, 200 feet west of Lehigh Valley Railroad; iron pin (Lehigh Valley Railroad bench mark).....	970.32
Reniff, southeast corner of highway bridge over Cayuta Creek; chisel mark on shoe.....	916.94

DRYDEN QUADRANGLE.

NORTH CANDOR, NORTH ALONG THE LEHIGH VALLEY RAILROAD, TO ITHACA.

Willseyville, Stevens Hotel, east end of walk between driveway and building; chisel mark on south end of stone step.....	948.38
Willseyville, 2.25 miles north of, Delaware, Lackawanna and Western Railroad bridge over highway, south abutment under west rail and 2.5 feet above ground; aluminum tablet stamped "957".....	958.250
Besemer, 1.12 miles west of, in field 50 feet north of track; hickory tree blazed "B. M. 46," spike in root (Lehigh Valley Railroad bench mark).....	952.40
East Ithaca, 2.5 miles southeast of, 0.25 mile west of small white schoolhouse among pines on south side of track and immediately west of private road crossing; iron pin set in boulder 20 feet north of track (Lehigh Valley Railroad bench mark No. 472).....	943.69
East Ithaca, 1.25 miles southeast of, 450 feet northwest of highway crossing and 20 feet north of track; iron pin set in large boulder (Lehigh Valley Railroad bench mark No. 49).....	901.37

BESEMER, EAST ALONG HIGHWAY TO CAROLINE, THENCE SOUTH TO SPEEDSVILLE, THENCE WEST TO WILLSEYVILLE.

Slaterville Springs, Methodist Church; chisel mark on top of southwest corner of foundation.....	1,117.81
Slaterville Springs, town clerk's office, east side of building, near northeast corner, 3 feet above ground; aluminum tablet stamped "A 1120".....	1,121.400
Speedsville, O. F. Freeland's store, west side of building, 8 feet north of southwest corner, in top course of masonry foundation; aluminum tablet stamped "A 1121".....	1,121.939
Perryville schoolhouse, east side of road, west end of first stone step from top, south of door; chisel mark.....	1,010.19

CAROLINE, NORTH TO DRYDEN, THENCE WEST TO ETNA.

Caroline, 1.25 miles north of, at West Oswego Creek, on abutment at southwest corner of bridge; chisel mark.....	1,305.36
Dryden, 2 miles south of, first crossing of Lehigh Valley Railroad north of Dryden Lake; top of rail.....	1,162.7
Dryden, South street crossing; top of rail.....	1,101.8
Dryden, Southworth Library building, in foundation course of masonry south front of structure; aluminum tablet stamped "A 1090".....	1,090.520

ETNA, SOUTHWEST ALONG THE LEHIGH VALLEY RAILROAD, TO ITHACA.

Etna, Lehigh Valley Railroad station, opposite east line of building; top of rail.....	1,025.6
Varna, 0.5 mile northeast of, at iron highway bridge over Fall Creek, west end of south abutment; chisel mark.....	956.43
Varna, opposite west line of station; top of rail.....	997.5
Varna, 1.5 miles southwest of, 1,200 feet west of milepost 52, on north side of track; iron pin set in boulder (Lehigh Valley Railroad bench mark No. 51).....	935.55
East Ithaca, 0.5 mile northeast of, abutment at southwest corner of iron highway bridge over Cascadilla Creek; iron pin (Lehigh Valley Railroad bench mark No. 502).....	866.88

East Ithaca, opposite south line of station; top of west rail, main track	Feet. 873.0
Ithaca, south end of Cornell University civil-engineering building, bottom course of foundation, 5 feet east of southwest corner; aluminum tablet stamped "A 814"	815.107

MORAVIA QUADRANGLE.

ETNA, NORTHEAST ALONG THE LEHIGH VALLEY RAILROAD, TO M'LEAN. (<)

Freeville, Lehigh Valley Railroad freight house, west side of fourth pedestal from south end under freight platform; chisel mark	1,047.30
McLean, north of small bridge at west side of square and south of store and post-office, in east wall of mill race; chiseled square marked "U. S. G. S. 1123"	1,119.61

M'LEAN, WEST TO MIDWAY, THENCE NORTH TO NORTH LANSING, THENCE NORTHEAST TO LOCKE, THENCE NORTH TO MORAVIA.

Peruville, 200 feet east of station, iron highway bridge, on southeast bridge seat; chiseled square	1,026.95
Peruville, 2.25 miles west of, in southeast corner of intersection of road running south, on southeast corner of stone step to front entrance of schoolhouse; chiseled square	1,396.82
Benson Corners, 0.33 mile south of, under most northerly of four butternut trees nearly opposite farmhouse, in boulder in east fence; copper bolt stamped "U. S. G. S. 1320 ft." ..	1,317.000
Midway, 1 mile north of, about 200 feet south of road running east and west, on southwest bridge seat of small bridge; chiseled square	983.20
North Lansing, R. Beardsley's store, south of and close to building; iron post stamped "U. S. G. S. B. M. 1005 Ft."	1,001.986
Locke, 3 miles southwest of, bridge at crossroads, on southeast bridge seat; chiseled square ..	941.63
Locke, George Culver's store, corner of Main and Mill streets, on top of curbstone; chiseled square	793.07
Locke station, railroad bridge over Owasco Inlet, 3,260 feet north of station; iron bolt cemented in southeast abutment	781.77

SAYLES CORNERS, SOUTHWEST TO MORAVIA.

Wilson Corners, top of retaining wall at blacksmith shop, in limestone boulder; chiseled square	1,091.24
Montville, grist mill north of blacksmith shop, in northeast corner of road running east, west step stone to stairs; chiseled square	913.57
Moravia, Moravia House, corner of Cayuga and Main streets, in northeast corner of foundation; bronze tablet stamped "743"	740.480
Moravia, Church street, at top of schoolhouse hill, capstone at north end of culvert; chiseled square	869.91

MORAVIA, EAST ALONG HIGHWAY TO DRESSERVILLE, THENCE SOUTH TO M'LEAN.

Dresserville, Kenyon's tannery lower dam, on eighth step from top of east wing; chiseled square	1,278.77
Dresserville, George Fritz's sawmill and gristmill, in west end of doorsill to south door of boiler house; copper bolt stamped "U. S. G. S. B. M. 1291 ft."	1,286.680
Lake Como, opposite, 100 feet north of intersection of road running west, on stone at foot of southwest wing wall of small bridge; chiseled square	1,332.47
Groton City, 2.25 miles north of, west abutment of Fall Creek Bridge, on capstone of north wing; chiseled square	1,292.33
Groton City, 0.25 mile north of, farm of George A. Bliss, 150 feet east of dwelling house and 125 feet east of road; copper bolt in boulder stamped "U. S. G. S. B. M. 1372 ft."	1,368.780
Lafayette, south end of culvert on road running east and about 150 feet east of intersection of road running north and south, on capstone; chiseled square	1,248.44
McLean, east side of North street, 60 feet south of evergreen trees planted in graveyard, on a straight line with road fence, in boulder opposite upper part of graveyard; copper bolt stamped "U. S. G. S. B. M. 1234 ft."	1,231.290

SKANEATELES QUADRANGLE.

SKANEATELES, SOUTH ALONG HIGHWAY TO OWASCO, THENCE SOUTHEAST TO GLENHAVEN.

Skaneateles, in west wing wall of State dam, first step from top; copper bolt stamped "U. S. G. S. B. M. 870 ft."	866.048
Owasco, brook north of, on northwest seat of iron bridge; chiseled square	792.47
Owasco, 0.25 mile southeast of, on road to Twelve Corners, in fifth foundation stone from south end of dry wall on east side of north approach to small iron bridge; copper bolt stamped "U. S. G. S. B. M. 853 ft."	849.588

	Feet.
Owasco, 2 miles from, on north wing stone southwest end of culvert at forks of road; chiseled square.....	1,175.88
Twelve Corners, house in northeast corner of road crossing, on boulder in front yard; chiseled square.....	1,391.91
Kelloggsville, opposite road from Twelve Corners, west side of maple tree and scales in front of W. D. Sayles's store, in boulder; copper bolt stamped "U. S. G. S. B. M. 1424 ft.".....	1,421.185
Sayles Corners, at south end of culvert across road from east; chiseled square.....	1,587.33
Skaneateles Lake, bridge over south inlet at intersection of roads southwest and north and south, on stone 3 feet east of southwest bridge seat; chiseled square.....	976.17
Glenhaven, iron bridge at south inlet of Skaneateles Lake, on northwest bridge seat; chiseled square.....	868.95

MARCELLUS STATION, SOUTH TO MARCELLUS.

Marcellus station, road culvert west of; southeast corner of coping stone on south wing wall.....	431.58
Limekiln, bridge across mill race opposite, on coping stone of north end of northeast wall; chiseled square.....	470.52
Marcellus Falls, at road running east, stone arch over creek, on coping stone at west end of parapet wall; chiseled square.....	513.17
Marcellus powder works, iron bridge south of, on southeast bridge seat; chiseled square.....	611.03
Marcellus, stone arch over Otisco Lake outlet (Ninemile Creek), on coping stone north of parapet wall; chiseled square.....	651.21
Marcellus, Main street, stone arch over Otisco Lake outlet (Ninemile Creek), in fourth coping stone east from angle at west end of north parapet wall, a little west of center; copper bolt stamped "U. S. G. S. B. M. 655 ft.".....	651.221

SKANEATELES, SOUTHEAST ALONG HIGHWAY TO MARIETTA, THENCE SOUTH TO GLENHAVEN.

Clintonville, culvert under road from south, on stone at southeast end; chiseled square.....	1,087.37
Marietta Hotel, at corner of roads to Clintonville and Rose Hill, on foundation stone north corner of plaza; chiseled square.....	796.15
Otisco Lake, highway bridge below State dam, on road from Marietta to Amber, southwest corner of bridge seat; chiseled square.....	776.86
Otisco Lake outlet, at west end of State dam, close to gate chamber; crest of spillway.....	782.62
Otisco Lake outlet, east wing of State dam, in south coping stone; copper bolt stamped "U. S. G. S. B. M. 789 ft.".....	786.230
Borodino, 0.5 mile north of, Thorn Hill road, 215 feet south of intersection of first road running east, in sandstone boulder on east side of driveway; copper bolt stamped "U. S. G. S. B. M. 1021 ft.".....	1,017.634
Spafford, in northwest corner of road crossing; water table at southeast corner of church, ...	1,691.74
Spafford, 0.5 mile south of, in Bruce Norton's lot, 200 feet from fence on bank of small brook, east side of road; copper bolt stamped "U. S. G. S. B. M. 1654 ft.".....	1,650.831

MORAVIA, NORTH TO CASCADE.

Cascade Hotel, 1.25 miles northwest of, in limestone boulder 10 feet southwest of bridge over small brook, on road running north and south; copper bolt stamped "U. S. G. S. B. M. 1091 ft.".....	1,088.284
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AUBURN QUADRANGLE.

CASCADE, NORTHWEST TO SCIPIO, THENCE WEST VIA BARBERS CORNERS TO LEVANA, THENCE SOUTH TO AURORA.

Cascade Hotel, 2 miles west of, on capstone of culvert in southeast corner of intersection of road running south; chiseled square.....	1,266.58
Scipio public school, 30 feet southeast of corner of, in boulder; copper bolt stamped "U. S. G. S. B. M. 1205 ft.".....	1,203.211
Scipioville, Watkins's store, on northeast corner of stepstone; chiseled square.....	989.46
Barbers Corners, 250 feet south of, in limestone boulder on east side of road under apple tree near bridge; copper bolt stamped "849".....	847.954
Aurora, Cayuga Military Academy, south door of basement, in west end of doorsill; copper bolt stamped "437".....	435.732

LEVANA, NORTH ALONG THE LEHIGH VALLEY RAILROAD, TO UNION SPRINGS.

[The error distributed in this line is excessive.]

Union Springs, basement door at south end of sanitarium, in west end of doorsill; copper bolt stamped "U. S. G. S. B. M. 421 ft.".....	418.680
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UNION SPRINGS, NORTHWEST ALONG THE LEHIGH VALLEY RAILROAD, TO AUBURN.

	Feet.
Half Acre, 1.25 miles southwest of railroad station, on stone near southwest corner of intersection of road to south; chiseled square.....	706.76
Aurelius, on mounting block in southwest corner of four corners; chiseled square.....	644.27
Aurelius, 1.75 miles east of, on southeast bridge seat of bridge over Crane Brook; chiseled square.....	635.84
Auburn, 411 feet south of south side of Genesee street, on east side of track; bolt in rock (Lehigh Valley Railroad bench mark, railroad elevation 647.083)	647.77
Auburn, south side of Genesee street, between Sherwood and Delevan streets; west side of coping (city bench mark).....	643.17
Auburn, northwest corner of court-house; water table (city bench mark).....	708.82
Auburn, North and Market streets; top of monument near southwest corner of city hall lot (city bench mark).....	671.75
Auburn, post-office building, Genesee street entrance, in top of wing stone at east end of steps; bronze tablet stamped "710 feet".....	707.719

UNION SPRINGS, NORTH ALONG HIGHWAY TO CAYUGA.

Cayuga, on northwest corner of doorsill to north door of malt house; chiseled square...	387.83
Cayuga, Cayuga and Seneca Canal, Lock No. 10, between anchors of west wing of south gate; copper bolt stamped "U. S. G. S. B. M. 392 ft."	390.420

AUBURN, SOUTH ALONG HIGHWAY TO SCIPIO.

Auburn, Genesee street, 2 miles south of, on Lehigh Valley Railroad; iron bolt in box culvert, 911 feet north of north side of public road.....	721.13
Fleming, Methodist Episcopal Church; copper bolt in door step, south door, stamped "U. S. G. S. B. M. 912 ft."	910.051

THROOPSVILLE, SOUTHWEST ALONG HIGHWAY TO CAYUGA.

Throopsville, 1.75 miles east of; iron bolt in foundation of culvert 201 feet north of point of switch (Lehigh Valley Railroad bench mark).....	546.060
Throopsville, north side of road just east of four corners, on southeast corner of stone horse block; chiseled square.....	516.36
Fosterville, 3 miles west of, 800 feet east of canal, south side of road, on granite bowlder horse block in front of wood-colored house; chiseled square.....	408.87

CAYUGA, MONROE, ONONDAGA, OSWEGO, AND WAYNE COUNTIES.

BALDWINVILLE, CLYDE, FULTON, MACEDON, OSWEGO, PALMYRA, ROCHESTER, AND WEEDSPORT QUADRANGLES.

The elevations in the following list are the result of the readjustment of primary levels previously reported in Appendixes to the Twentieth and Twenty-first Annual Reports of the Director, United States Geological Survey. The leveling was done as follows: On Rochester, Macedon, and Palmyra quadrangles and part of Clyde quadrangle under Mr. J. H. Wheat, topographer, in 1898, and the remainder on the Clyde quadrangle under Mr. J. H. Jennings, topographer, in 1899; on Rochester quadrangle, by Mr. C. H. Semper, levelman, and on the other quadrangles by Messrs. Semper and D. E. Baxter, levelmen. The leveling on Oswego, Weedsport, and Baldwinville quadrangles was done in 1898 under Mr. E. B. Clark, topographer, by Mr. Baxter, and that on Fulton quadrangle was done also in 1898, under Mr. Clark, by Messrs. Semper and Baxter. The standard bench marks are stamped mostly "OSWEGO" in full or abbreviated, in addition to figures of elevation, which are mostly 1 foot low.

FULTON QUADRANGLE.

OSWEGO, SOUTH VIA FULTON TO HINMANSVILLE.

	Feet.
Minetto, State dam, west side of Oswego River, southeast corner of third bulkhead pier on top of surface; aluminum tablet stamped "302 A".....	303.344
Minetto, 0.07 mile south of, Oswego Canal, between cinchers of middle gate; copper bolt (canal bench mark at Lock No. 12).....	308.54
Minetto, 1.3 miles south of, south wing of west abutment, second step; copper bolt (canal bench mark at bridge).....	311.28
Minetto, 3.0 miles south of, Oswego Canal, between cinchers of middle gate; copper bolt (canal bench mark Guard Lock No. 4)	311.99

	Feet.
Minetto, 4.7 miles south of, Oswego Canal, Lock No. 11, middle hollow between cinchers; copper bolt (L. S. B. M. No. 129)	320.18
Minetto, 5.5 miles south of, Oswego Canal, on first stone step, south end abutment; copper bolt (L. S. B. M. No. 128)	322.47
Minetto, 5.9 miles south of, Oswego Canal, in first step of abutment, south end; copper bolt (L. S. B. M. No. 127)	323.16
Minetto, 6.1 miles south of, Oswego Canal, on north hollow quoin between cinchers; copper bolt (L. S. B. M. No. 126)	329.025
Minetto, 6.2 miles south of, Lock No. 9, in middle hollow quoin between cinchers; copper bolt (Oswego Canal bench mark)	337.15
Fulton, northwest corner of town hall, South First street, in water table; aluminum tablet stamped "363 A"	364.542
Fulton, 0.5 mile south of, Oswego Canal, Lock No. 8, on lower hollow quoin between cinchers; copper bolt (L. S. B. M. No. 125)	347.946
Fulton, 0.8 mile south of, Oswego Canal, first step of abutment, south end; copper bolt (canal bench mark)	351.00
Fulton, 0.9 mile south of, Oswego Canal, Guard Lock No. 3, in lower hollow quoin between cinchers; copper bolt (canal bench mark)	352.03
Fulton, 4.3 miles south of, Lock No. 7, in middle hollow quoin between cinches; copper bolt (canal bench mark)	353.52
Fulton, 5.5 miles south of, Oswego Canal, unused lock, in lower hollow quoin; copper bolt (canal bench mark)	359.89

FULTON, EAST TO GILBERTS MILLS, THENCE NORTH TO VERMILION, THENCE WEST TO OSWEGO.

Gilbert Mills, southeast corner of schoolhouse, District No. 5; aluminum tablet stamped "435 OSWEGO"	436.144
Vermilion, on southeast corner of Methodist Church, Main street; aluminum tablet stamped "422 OSWEGO"	422.559
South Scriba, on north side of Hall road, in southeast corner of Ladies' Aid Society hall; aluminum tablet stamped "400 OSWEGO"	401.517
Lansing, on northeast corner of brick schoolhouse; chiseled square	418.84
Oswego, at Rome, Watertown and Ogdensburg railroad crossing, on Hall road; top of west rail	322.1

FULTON, SOUTHWEST TO BOWENS CORNERS.

Fulton, 1.9 miles west of, 30 feet east of road to south, south end of west abutment of highway bridge over Lye Creek; chiseled square	371.84
Bowens Corners, south door of brick schoolhouse, District No. 5, on stone doorstep; aluminum tablet stamped "449 OSWEGO"	449.603

BALDWINSVILLE QUADRANGLE.

HINMANSVILLE, SOUTH VIA BALDWINSVILLE TO NEWPORT.

Hinmansville, Oswego Canal, Lock No. 6, in lower hollow quoin between cinchers; copper bolt (canal bench mark)	360.68
Phoenix, Culvert street, Oswego Canal, in second step of bridge abutment, south end; copper bolt (canal bench mark)	364.88
Phoenix, northwest corner of Union Academy, Bridge and Cherry streets, Cherry street front, in water table; aluminum tablet stamped "394 OSWEGO"	395.020
Phoenix, Oswego Canal, in second step of abutment, south end, on Bridge street; copper bolt stamped "364 A" (canal bench mark)	365.000
Phoenix, Oswego Canal, Guard Lock No. 1, in upper hollow quoin between cinchers; copper bolt stamped "363 A" (canal bench mark)	364.400
Baldwinsville, southeast corner of Free Academy, Elizabeth street; aluminum tablet stamped "423 OSWEGO"	424.348
Warners, 700 feet east of crossroads, Mr. Hawley's brick dwelling, in east end of stone water table; aluminum tablet stamped "477 OSWEGO"	478.190
Newport, at Warners, southwest corner of hotel barn, 30 feet north of canal; chisel mark on boulder (Erie Canal bench mark)	412.587

BOWENS CORNERS, SOUTH TO PERU.

Plainville, 300 feet west of four corners at center of town, north side of road, in top step of schoolhouse, District No. 5; aluminum tablet stamped "403 OSWEGO"	403.689
Peru, highway bridge over Erie Canal, towpath abutment, in west end of bottom step; copper bolt (N. Y. S. B. M. No. 324)	413.643

PRIMARY LEVELING.

79

JORDAN (SET FROM CANAL BENCH MARK 330).

	Feet.
Jordan, in Jordan Academy, front of building, 3 feet east of door, in stone water table; aluminum tablet stamped "OSWEGO 481".....	480.505

OSWEGO QUADRANGLE.

RED CREEK, NORTHEAST TO OSWEGO.

Red Creek, on Second street, Red Creek Academy, 225 feet north of Rome, Watertown and Ogdensburg Railroad, on west side of street; aluminum tablet in stone foundation stamped "355 OSWEGO".....	356.410
Red Creek, 200 feet west of station, road crossing; top of rail.....	335.3
Sterling, 2.1 miles southwest of, railroad bridge over highway, fourth step of east wing of north abutment; chiseled square.....	339.48
Sterling, at crossing of the Rome, Watertown and Ogdensburg and the Lehigh Valley railroads; top of rail.....	321.0
Hannibal, schoolhouse on Oswego street, in stone doorsill of north entrance; aluminum tablet stamped "354 OSWEGO".....	355.057
Oswego, 3.5 miles north of, wharf line of south side of basin, 5 feet from east face of old United States stone pier at foot of West Third street; top of iron bolt flush with top of masonry, stamped "U. S. + B. M.".....	251.898
Oswego, northeast corner of post-office building, corner of Oneida and West First streets, in water table; aluminum tablet stamped "295 OSWEGO".....	295.753

WEEDSPORT QUADRANGLE.

STERLING STATION, SOUTH ALONG THE LEHIGH VALLEY RAILROAD TO CATO, THENCE SOUTHWEST ALONG HIGHWAY TO CONQUEST, THENCE SOUTH TO PORT BYRON.

Ira, highway crossing 200 feet north of station; top of east rail, main track.....	419.7
Ira station, about 700 feet southwest of station, in northeast corner of water table of brick house; bronze tablet stamped "430 OSWEGO".....	431.585
Cato, highway crossing 200 feet north of station; top of east rail, main track.....	419.0
Cato, northwest corner of Main and North streets, southeast corner of water table of brick building; aluminum tablet stamped "461 OSWEGO".....	462.811
Conquest, 0.6 mile south of, east side of road, in south side front of brick house, in water table; bronze tablet stamped "449 A".....	450.454
Port Byron, West Shore Railroad; top of north rail.....	396.8
Port Byron, Canal street highway bridge over Erie Canal, east wing of towpath abutment; copper bolt.....	406.63
Port Byron, highway bridge just east of Canal street, east wing of towpath abutment; copper bolt.....	407.54
Port Byron, Lock No. 52, fourth step from west end of north side lock pier; copper bolt (N. Y. 352).....	403.279
Port Byron, Lock No. 52, east hollow quoin south side of lock; head bolt stamped "404 A".....	406.005

MONTEZUMA AND WEEDSPORT, SET FROM STATE ENGINEER'S BENCH MARK.

Montezuma, in northeast corner of Methodist Church, Auburn street, in foundation masonry; bronze tablet stamped "417 OSWEGO".....	417.449
WeedSPORT, Methodist Episcopal Church, on south side of Brutus street, in front face of east end of foundation wall; bronze tablet stamped "433 OSWEGO".....	433.256

CLYDE QUADRANGLE.

CLYDE (SET FROM STATE BENCH MARKS.)

Clyde, Methodist Episcopal Church, on northeast side of Sodus street, in north end of foundation of front wall; aluminum tablet stamped "406 OSWEGO".....	405.196
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WALLINGTON, EAST ALONG HIGHWAY AND RAILROAD TO RED CREEK.

Alton, highway crossing; top of rail.....	402.8
Dunbar, road crossing; top of north rail.....	393.7
North Rose, in front of station; top of rail.....	387.80
Wolcott, Main street highway crossing; top of north rail.....	361.7
Wolcott, northwest corner of Main and Clyde streets, in masonry foundation southeast corner of Baptist Church; aluminum tablet stamped "378 OSWEGO".....	379.026

WOLCOTT, SOUTH ALONG HIGHWAY TO MAYS POINT.

South Butler, in northwest corner of schoolhouse on road east from hotel; bronze tablet stamped "399 OSWEGO-1899".....	399.717
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	Feet.
Savannah, northeast corner Main and East Church streets; top of concrete monument.....	420.20
Savannah, 4.8 miles south of, Barry Bridge No. 1, Western division, in top of first step of west wing of north abutment; top of copper bolt stamped "B. M. 2".....	395.16

NORTH ROSE, SOUTHWEST ALONG HIGHWAY TO LYONS.

Wayne Center, in southeast corner of schoolhouse on crossroads; bronze tablet stamped "438 OSWEGO 1899".....	438.942
Lyons, on west side of Broad street, between Church and Pearl streets, in Dutch Reformed Church; bronze tablet stamped "OSWEGO 437, 1899".....	438.395
Lyons, Water street highway bridge over canal, east wing of towpath abutment; chiseled square.....	407.727

PALMYRA QUADRANGLE.

ONTARIO, EAST ALONG HIGHWAY TO WALLINGTON.

Williamson, in front of station; top of rail.....	420.2
East Williamson, at road crossing; top of rail.....	417.0
Sodus, highway crossing, main track; top of rail.....	428.8
Sodus, southwest corner of Third Methodist Episcopal Church, on Ridge road, in water table; aluminum tablet stamped "457 O".....	458.255
Wallington, on southwest corner of stone foundation of railroad water tank; chiseled square.....	405.90

GALLOWAY'S BRIDGE, NORTHEAST ALONG HIGHWAYS TO EAST PALMYRA.

East Palmyra, 2.3 miles southwest of, Galloway's highway bridge over Erie Canal, east wing of towpath abutment; chiseled square.....	449.57
East Palmyra, Presbyterian Church, in northwest corner of water table; bronze tablet stamped "471 OSWGO".....	471.826

WILLIAMSON, SOUTH ALONG HIGHWAY TO MARION (SINGLE-SPUR LINE).

Williamson, Union Academy, northwest corner of building; aluminum tablet stamped "454 OSWGO".....	454.843
Marion, 500 feet north of four corners, Main street front of the Marion Collegiate Institute; aluminum tablet stamped "462 OSWGO".....	462.813

WALLINGTON, SOUTH ALONG THE NORTHERN CENTRAL RAILWAY TO NEWARK.

Wallington, 0.9 mile south of, Culvert No. 45, over Salmon Creek, northwest corner of masonry; chiseled square.....	405.90
Sodus Center, 0.3 mile south of, Bridge No. 44, over Salmon Creek, on west wing of south abutment; chiseled square.....	411.03
Zurich, in front of station; top of rail.....	441.5
Fairville, brick schoolhouse, District No. 2, 475 feet west of Northern Central Railway, in masonry foundation, 7 feet south of front entrance; aluminum tablet stamped "456 OSWGO".....	456.802
Fairville, 0.9 mile south of, railroad bridge No. 40, over Mud Creek, west end of south abutment; chiseled square.....	414.21
Fairville, 2.9 miles south of, railroad bridge No. 37, over Mud Creek, west end of south abutment; chiseled square.....	416.35
Newark station, of New York Central and Hudson River Railroad, Northern Central Railway bridge over New York Central and Hudson River Railroad tracks, on top step, west end of south abutment; chiseled square.....	434.25
Newark, Charles Street Bridge over Erie Canal, towpath side, on bottom step of east wing; chiseled square.....	447.81
Newark, southwest corner of Charles and Miller streets, Miller street front of Baptist Church, 1 foot from northeast corner, in water table; aluminum tablet stamped "457 OSWGO"....	457.570

MACEDON QUADRANGLE.

FORESTLAWN, EAST ALONG HIGHWAY TO ONTARIO.

Union Hill station, road crossing near; top of rail.....	425.7
Lakeside, on west wall of railroad culvert, north side of track, 600 feet west of station, on top step; chiseled square.....	421.56
Lakeside, highway crossing east of; top of rail.....	424.0
Ontario, in front of station; top of rail.....	414.6

WEBSTER, SOUTH ALONG HIGHWAY TO FAIRPORT.

	Feet.
Webster, at northeast corner of Union Academy building, in water table; aluminum tablet stamped "465 OSWGO".....	466.225
Fairport, Main street, New York Central and Hudson River Railroad; top of rail.....	455.8
Fairport, Main street, West Shore Railroad; top of rail.....	455.6
Fairport; Union school, in water table of Church street front; aluminum tablet stamped "498 OSWGO".....	498.983

ONTARIO, SOUTH VIA WALWORTH TO PALMYRA.

Walworth, at northwest corner of Walworth Academy building, in water table; aluminum tablet stamped "564 OSWGO".....	564.785
Palmyra, 1 mile west of, Mud Creek Aqueduct, in buttress of south wing of west abutment; aluminum tablet stamped "446 OSWGO".....	446.625

FAIRPORT, SOUTH TO BUSHNELL BASIN.

Bushnell Basin, Bridge No. 50 over Erie Canal, towpath abutment, inner face of west wing; bronze tablet stamped "465 OSWGO".....	465.759
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ROCHESTER QUADRANGLE.

CHARLOTTE, EAST ALONG THE ROME, WATERTOWN AND OGDENSBURG RAILROAD TO FORESTLAWN.

Charlotte, upper side of water table of old light-house, at southeast angle east of the south window; chiseled circle (United States Engineers' bench mark No. 1).....	283.168
Charlotte, Genesee River, railroad swing bridge over, on southwest corner of west abutment of bridge, on top of parapet wall; chiseled square.....	257.16
Windsor, station of Rome, Watertown and Ogdensburg Railroad, cement foundation of first post of building east of station; chiseled square.....	278.46
Irondequoit, in front of Lake Shore Hotel; top of rail.....	270.2
Irondequoit Bay, Rome, Watertown and Ogdensburg Railroad bridge over outlet of, fourth step of east abutment, north side of track, on northeast corner; chiseled square.....	252.23
Forestlawn, 0.8 mile west of, railroad bridge over Webster road, on west abutment, north side of top step; chiseled square.....	266.49

ONTARIO, SCHUYLER, SENECA, STEUBEN, TOMPKINS, AND YATES COUNTIES.

GENEVA, GENOA, OVID, PENN YAN, AND PHELPS QUADRANGLES.

The elevations in the following list are based upon the readjustment of primary levels previously reported in Appendix to the Twenty-first Annual Report of the Director, United States Geological Survey. The leveling was done in 1899 under the direction of Mr. J. H. Jennings, topographer, as follows: On Geneva and Phelps quadrangles by Mr. C. H. Semper, levelman, and on the remainder jointly by Messrs. Semper and W. F. Hammond, levelmen. The standard bench marks are stamped "OSWEGO," in addition to figures of elevation, which are 1 foot low.

GENEVA QUADRANGLE.

GENEVA, NORTH TO LYONS.

	Feet.
East X, on southwest corner of stone step of station house on Lyons and Geneva Railroad; chiseled mark.....	478.65
Mitchell (West Junius), in north face wall of post-office at railroad crossing; bronze tablet stamped "491 OSWEGO 1899".....	492.524

GENEVA, SOUTH ALONG LEHIGH VALLEY RAILROAD TO KENDAIA.

Geneva, in west face of St. Peter's Church, in water table; bronze tablet stamped "481 OSWEGO 1899".....	481.524
Geneva, 1.9 miles south of, in west end of south abutment of Bridge No. 342, Lehigh Valley Railroad; copper bolt.....	465.52
Geneva, 6.3 miles south of, in top step west end of south abutment of Lake road overhead Bridge No. 337, Lehigh Valley Railroad; top of iron bolt.....	523.09
Varick, 1.8 miles south of, in northeast foundation stone of Lehigh Valley water tank, on west side of road; bronze tablet stamped "562 OSWEGO 1899".....	563.385

MAYS POINT, SOUTH TO FAYETTE.

	Feet.
Mays Point, in west wing south abutment, in third step, of Mays Canal Bridge; bronze tablet stamped "396 OSWEGO 1899".....	396.642
Seneca Falls, in south face wall of Mynderse Academy, North Park street; bronze tablet stamped "465 OSWEGO 1899".....	466.066
Fayette post-office, in northwest corner of Dutch Reformed Church; bronze tablet stamped "612 OSWEGO 1899".....	613.223

PHELPS QUADRANGLE.

NEWARK, SOUTH ALONG THE NORTHERN CENTRAL RAILWAY, TO PHELPS JUNCTION,
THENCE SOUTHEAST TO EAST X.

Phelps Junction, 1.2 miles east of, on east end of stone abutment of aqueduct on south side of track, 15 feet from east end of wall; chisel mark.....	536.82
Phelps, southwest corner of schoolhouse, corner of Main and Banta streets; aluminum tablet stamped "542 OSWEGO 1899".....	543.142

PHELPS JUNCTION, WEST ALONG THE NEW YORK CENTRAL AND HUDSON RIVER
RAILROAD, TO MANCHESTER.

Phelps Junction, 1.2 miles west of, on south side of railroad, top of stone abutment of creek bridge; chisel mark.....	565.49
Clifton Springs, 3.9 miles west of, Lehigh Valley overhead bridge over Auburn branch of New York Central and Hudson River Railroad, north abutment; bronze tablet stamped "611 OSWEGO 1899".....	612.031
Manchester, west abutment of Lehigh Valley Railroad bridge; top of bolt (railroad bench mark No. 359).....	607.44

PHELPS JUNCTION, SOUTH ALONG THE NORTHERN CENTRAL RAILWAY TO BELLONA.

Stanley, in northwest corner of grain elevator at railway station; aluminum tablet stamped "903 OSWEGO 1899".....	904.027
Bellona, in southeast corner of Memorial Presbyterian Church on Main street; aluminum tablet stamped "731 OSWEGO 1899".....	732.207

STANLEY, SOUTHWEST ALONG THE LEHIGH VALLEY RAILROAD, TO RUSHVILLE.

Rushville, in northeast corner of Methodist Episcopal Church, in water table; tablet stamped "870 OSWEGO".....	871.063
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STANLEY, WEST ALONG THE NEW YORK CENTRAL AND HUDSON RIVER RAILROAD, TO
CANANDAIGUA.

[The error distributed in this list is excessive.]

Ennerdale (Beula post-office), 30 feet south of station building, south side of railroad, on east margin of highway, in large boulder; bronze tablet stamped "851 OSWEGO".....	851.393
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GENOA QUADRANGLE.

OVID CENTER, SOUTHEAST ALONG THE LEHIGH VALLEY RAILROAD, TO ITHACA.

Ovid Center, 2.5 miles south of, set in bridge seat of cattle pass, northeast side; top of iron rod (L. V. B. M. No. 325).....	821.83
Farmer, corner of Main and Lodi streets, in northeast corner of Baptist Church; bronze tablet stamped "912".....	912.420
Farmer, 0.7 mile south of, in north wall of cattle pass, east side; top of iron bolt stamped "B. M. No. 323".....	843.88
Farmer, 2.4 miles south of, 600 feet north of highway, by fence west of railroad; top of iron bolt stamped "B. M. No. 322" (L. V.).....	849.18
Covert, 1.4 miles south of, on west side of railroad, set in rock; top of iron pin stamped "320" (L. V.).....	901.41
Covert, 1.9 miles south of, on west side of railroad, 600 feet south of highway, set in rock; top of iron pin (No. 319 L. V.).....	882.08
Trumansburg, in south face of Union School and Academy; bronze tablet stamped "1000 OSWEGO 1899".....	1,000.390
Trumansburg, first crossing west of station, set in rock on north side of track; iron pin (Lehigh Valley bench mark No. 318).....	874.98
Willow Creek, 3 miles south of; top of iron plug set in boulder (L. V. B. M. No. 311).....	588.02

ITHACA, NORTH ALONG ROAD TO SCIPIO.

	Feet.
Ludlowville, in south end of bulkhead dam; aluminum tablet stamped "481 OSWEGO"...	482.334
Genoa, northeast corner of Hotel DeWitt, in top of retaining wall; aluminum tablet stamped "837 OSWEGO".....	838.591
Venice Center, north side of hotel building, in foundation stone; aluminum tablet stamped "998 OSWEGO".....	999.600

LUDLOWVILLE, NORTHWEST ALONG ROAD, TO AURORA.

Black Rock (Ellsworth post-office), iron bridge over Paines Creek, west abutment, in top of south wing; aluminum tablet stamped "723 OSWEGO".....	724.413
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OVID QUADRANGLE.

HIMROD, SOUTH ALONG THE FALL BROOK RAILWAY, TO READING CENTER.

Himrod, 500 feet north of, on west end south abutment of bridge on Northern Central Railway; chisel mark.....	799.10
Dundee, on foundation of railway water tank; chisel mark.....	989.52

KENDAIA, SOUTH ALONG THE LEHIGH VALLEY RAILROAD, TO HECTOR.

Kendaia, 40 feet east of railroad on highway, in northwest corner of foundation wall of grain elevator; bronze tablet stamped "614 OSWEGO 1899".....	614.856
Kendaia, 2.2 miles south of, at railroad crossing, in south wall west side of cattle pass; top of iron bolt (No. 329, L. V.).....	648.46
Kendaia, 3.5 miles south of, 30 feet east of railroad at road crossing, in masonry road culvert; top of iron bolt (No. 328, L. V.).....	671.72
Willard, in masonry on west side of railroad in first highway south of station; top of iron bolt (No. 326, L. V.).....	709.09
Willard, 0.8 mile south of, in top of stone cattle pass, northwest side of railroad; top of iron bolt (No. 326, L. V.).....	722.15
Willard, 3.2 miles south of, in masonry of overhead bridge on northwest side; top of iron bolt (No. 323, L. V.).....	774.17
Lodi, 0.8 mile south of, overhead farm bridge on northwest wing in step; top of iron pin (No. 322, L. V.).....	801.22
Lodi, 1.9 miles south of, in top of masonry of creek bridge on east side of railroad; top of iron bolt (No. 321, L. V.).....	817.73
Lodi, 2.9 miles south of, in top of wall of cattle pass on northeast side of railroad; top of iron pin (No. 320, L. V.).....	829.82
Caywood, 0.2 mile south of, top of stone culvert masonry, on southeast side; top of iron bolt (No. 319, L. V.).....	839.37
North Hector, 0.5 mile south of station, 0.2 mile west of railroad, in masonry of basket factory, on crossroads; bronze tablet stamped "840 OSWEGO 1899".....	840.639

FAYETTE, SOUTH ALONG THE LEHIGH VALLEY RAILROAD, TO OVID CENTER.

Hayt Corners, 2.2 miles north of, on southwest side of railroad, 30 feet west of road; top of iron bolt stamped "B. M. 333" (L. V.).....	742.53
Hayt Corners, 1.6 miles north of, 1,500 feet east of railroad crossing, 20 feet east of red farm gate; top of iron bolt (B. M. 333 L. V.).....	740.08

TRUMANSBURG, WEST TO EAST STEAMBURG (SINGLE-SPUR LINE).

East Steamburg, northeast corner of Sherwood's house, 200 feet northwest of northwest corner of crossroads, in east wall; bronze tablet stamped "1544 OSWEGO".....	1,544.396
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PENN YAN QUADRANGLE.

BELLONA, SOUTH ALONG THE NORTHERN CENTRAL RAILWAY TO HIMROD.

Benton, in northeast corner of Methodist Church; tablet stamped "1089 OSWEGO 1899"...	1,089.814
Penn Yan, in front face of Penn Yan Academy; aluminum tablet stamped "767 OSWEGO 1899".....	768.497
Milo Center, in east side of church on Main street; tablet stamped "947 OSWEGO 1899".....	947.809

HIMROD, SOUTHWEST ALONG HIGHWAY (SINGLE-SPUR LINE).

Himrod, 4.5 miles southwest of, small bridge 0.75 mile south of forks of road, in face of east wing of north abutment; tablet stamped "1111 OSWEGO 1899".....	1,112.490
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POTTER CENTER, SOUTH VIA BRANCHPORT TO CATAWBA.

	Feet.
Potter Center, in east end of north abutment of iron bridge over Flint Creek; tablet stamped "893 OSWEGO 1899".....	893.490
Friend, on west abutment at north end of bridge; chiseled square.....	987.88
Branchport, 1,200 feet east of, in south end of west abutment of highway bridge, road to Penn Yan; tablet stamped "720 OSWEGO 1899".....	720.702
Gulicksville (near Pulteney post-office), in west end north wall of iron bridge; aluminum tablet stamped "733 OSWEGO 1899".....	733.615

CHEMUNG, LIVINGSTON, ONTARIO, SCHUYLER, STEUBEN, AND YATES COUNTIES.

BATH, ELMIRA, HAMMONDSPORT, NAPLES, AND WATKINS QUADRANGLES.

The elevations in the following list result from a readjustment of leveling reported in the Appendixes to the Twentieth and Twenty-first Annual Reports of the Director, United States Geological Survey, with additional work. For additional elevations on Elmira quadrangle, see "Precise leveling," pages 14-15, 22. The leveling on Elmira and Watkins quadrangles was done in 1898 under the direction of Mr. R. D. Cummin, topographer, by Mr. W. W. Gilbert, levelman; that on Hammondsport and Corning quadrangles and part of that on Bath quadrangle was done in 1899 under Mr. J. H. Jennings, topographer, by Mr. W. F. Hammond, levelman, and the leveling on Naples quadrangle and on the remainder of Bath quadrangle was done in 1900 under the direction of Mr. Jennings, by Mr. W. E. Green, levelman. The standard bench marks set by Hammond are stamped "OSWEGO," in addition to figures of elevation, mostly correct; and the others are stamped "D," with figures of elevation, mostly 1 foot below.

ELMIRA QUADRANGLE.

HORSEHEADS, ALONG THE NORTHERN CENTRAL RAILWAY TO WATKINS, THENCE TO BURDETT.

	Feet.
Horseheads, Lehigh Valley Railroad, opposite southeast line of Horseheads station; top of rail, main track.....	890.8
Horseheads, men's waiting room of Northern Central station; northwest corner of stone doorsill.....	900.11
Pine Valley, opposite south line of Pine Valley station; top of rail.....	891.0

WATKINS QUADRANGLE.

Millport, highway bridge over Catherine Creek at Millport House, in face of abutment at southwest corner; bronze tablet stamped "709 D".....	710.627
Millport, at north line of station; top of rail.....	750.5
Montour Falls, 1.37 miles south of, south abutment of Northern Central Railway bridge over highway, on top stone; chisel mark.....	509.77
Montour Falls, opposite north line of station; top of rail.....	457.8
Montour Falls, old Schuyler County court-house, on foundation (base) of east pillar, front of court-house; chisel mark.....	467.23
Watkins, 0.5 mile south of station, on southeast corner of north abutment of Northern Central Railway bridge over Glen Creek; chisel mark.....	461.47
Watkins, Schuyler County court-house, in foundation at front, second course of stone from top, 3 feet south of northwest corner; bronze tablet stamped "476 D".....	477.403
Burdett, at south line of station, Lehigh Valley Railroad; top of rail.....	1,003.3

BURDETT, SOUTHEAST ALONG THE LEHIGH VALLEY RAILROAD TO ODESSA, THENCE SOUTHWEST TO MILLPORT.

Burdett, 600 feet south of station; in north end of coping, west end of culvert under Lehigh Valley Railroad; copper bolt stamped "1002 D".....	1,003.437
Burdett station, north end of coping, west end of culvert under Lehigh Valley Railroad; iron bolt (Lehigh Valley bench mark No. 309).....	1,003.592
Burdett station, 1.37 miles south of, in top course of west end of south abutment of railroad bridge over intersection of highways; iron bolt (Lehigh Valley bench mark No. 307).....	1,019.80
Burdett station, 3 miles south of, 150 feet north of milepost 307, in top stone of east end of small culvert under railroad; iron bolt (Lehigh Valley bench mark No. 306).....	1,041.73
Burdett station, 4.12 miles south of, in face of west abutment of highway bridge over railroad, near north end of abutment, 0.12 mile south of milepost 306; iron pin (Lehigh Valley bench mark No. 305).....	1,060.43

Feet.

Odessa, 2 miles north of, in top stone at east end of culvert under railroad, 450 feet south of milepost 305; iron bolt (Lehigh Valley bench mark No. 304).....	1,071.01
Odessa, 1.12 miles north of, in top stone at east end of culvert under railroad, 250 feet north of milepost 304; iron pin (Lehigh Valley Railroad bench mark No. 303).....	1,078.48
Odessa, 0.12 mile north of, in coping of west end of south abutment of railroad bridge over highway; iron bolt (Lehigh Valley bench mark No. 302).....	1,090.62
Odessa, at south end of station; top east of rail, west track.....	1,093.8
Odessa, 550 feet south of station, on west end of culvert under Lehigh Valley Railroad, in face of coping near north end; bronze tablet stamped "1053 D".....	1,054.623

WATKINS, WEST VIA WATKINS STATION OF THE FALL BROOK DIVISION NEW YORK CENTRAL RAILROAD, TO TOWNSEND, THENCE SOUTH TO BEAVERDAMS, THENCE EAST TO MILLPORT.

Watkins, 0.5 mile north of post-office, Steuben street, on northwest corner of south abutment of bridge over stream; chiseled cross.....	624.87
Watkins, opposite south line of station; top of rail.....	1,003.4
Watkins Glen station, at south line of; top of rail.....	1,009.1
Watkins Glen station, railroad bridge over Glen Creek, on southeast corner of north abutment; chisel mark.....	1,009.42
Townsend, 2 miles south of, house of W. T. Beebe on east side of Beaverdams road, on northeast corner of top step of a flight of stone steps leading from the house to the road; chisel mark.....	1,342.56
Beaverdams, 0.75 mile south of, on abutment at northwest corner of iron highway bridge over small stream; chisel mark.....	1,234.32
Beaverdams, in foundation of house of David Beardsley, center of front, second course from top; aluminum tablet stamped "1262 D".....	1,263.179
Kendalls, 1 mile northeast of, abutment at north corner of iron highway bridge over East Creek; chisel mark.....	1,260.93
Millport, 2.5 miles west of, Schoolhouse No. 9, Catlin Township, at southwest corner of building, on footing course of foundation; chisel mark.....	1,050.75

WATKINS STATION, NORTH ALONG HIGHWAY TO READING CENTER.

Reading Center, in foundation south side of Baptist Church, 4.5 feet from southeast corner, fourth course from top; bronze tablet stamped "1253 D".....	1,253.894
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BURDETT, NORTH ALONG THE LEHIGH VALLEY RAILROAD TO HECTOR.

Burdett station, 2.75 miles north of, east side of water tank, north pier west of track; iron bolt (Lehigh Valley bench mark No. 312).....	963.81
Burdett station, 4 miles north of, in west end of south abutment of Lehigh Valley Railroad bridge over small stream, 100 feet north of milepost 314, back of house of J. B. Erway; copper bolt stamped "939 D".....	940.461
Burdett station, 4 miles north of, in west end of south abutment of bridge over small stream; iron bolt (Lehigh Valley bench mark No. 313).....	940.582

HAMMONDSPORT QUADRANGLE.

CATAWBA, SOUTHWEST TO HAMMONDSPORT.

Urbana, in east side of wine cellar; tablet stamped "734 OSWEGO 1899".....	734.479
Hammondsport, 0.25 mile south of, in west end of north abutment of bridge over inlet to Lake Keuka; tablet stamped "718 OSWEGO 1899".....	718.662

SAVONA, NORTHEAST VIA BRADFORD AND TYRONE, TO READING CENTER.

Savona, in south end of east abutment of highway bridge over Cohocton River; tablet stamped "1050 OSWEGO".....	1,050.708
Bradford, in top of west end of south abutment of bridge; bronze tablet stamped "1100 OSWEGO 1899".....	1,100.442
Tyrone, in west end of south wall of highway bridge at gristmill; bronze tablet stamped "1155 OSWEGO 1899".....	1,155.231
Altay, 1,000 feet west of, in top of north wing of east abutment of highway bridge; bronze tablet stamped "1213 OSWEGO 1899".....	1,213.661

COOPER, NORTH VIA EAST CAMPBELL AND MONTEREY, TO TYRONE.

Monterey, 60 feet northwest of iron bridge, in bowlder; bronze tablet stamped "1212 OSWEGO 1899".....	1,212.778
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SAVONA, VIA THE ERIE RAILROAD TO PAINTED POST.

	Feet.
Campbells, 700 feet north of station, south wall of railroad girder bridge, on east end of bridge seat; chisel mark.....	1,007.21
Painted Post, 2 miles north of, crossing of the Delaware, Lackawanna and Western and the Erie railroads; top of rail.....	949.16
Painted Post, 0.8 mile west of, in southeast corner of open bridge, on precise-level line; bronze tablet stamped "935 DUNKIRK 1898".....	936.195

BATH QUADRANGLE.

HAMMONDSPORT, SOUTHWEST TO BATH, THENCE SOUTHEAST TO SAVONA.

Bath, county clerk's office, at left entrance, in water table; tablet stamped "1103 OSWEGO 1899".....	1,103.427
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COHOCTON, SOUTHEAST ALONG THE ERIE RAILROAD, TO BATH.

Wallace, Main street crossing; top of rail.....	1,230.7
Avoca, Main street crossing; top of rail.....	1,195.6
Avoca, crossing of Delaware, Lackawanna and Western Railroad, Main street; top of rail.....	1,193.9
Avoca, on southeast corner of Methodist Episcopal Church; bronze tablet stamped "1191 DUNKIRK".....	1,191.664
Avoca, opposite station door; top of rail.....	1,194.9
Kanona, Main street railroad crossing; top of rail.....	1,149.1

KANONA, NORTH ALONG THE KANONA AND PRATTSBURG RAILWAY TO PRATTSBURG.

Kanona, north of station, at road crossing; top of rail.....	1,184.0
Wheeler, 50 feet north of station, at road crossing; top of rail.....	1,249.5
Wheeler, southeast corner of Frank Aull's house, in cellar wall; bronze tablet stamped "1262 DUNKIRK".....	1,262.845

NAPLES QUADRANGLE.

RUSHVILLE, SOUTH ALONG RAILROAD TO NAPLES.

Middlesex, in water table of brick schoolhouse; bronze tablet stamped "735 D".....	735.642
Middlesex, 100 feet northeast of station, at highway crossing; top of rail.....	717.0
Parish, in front of station; top of rail.....	695.8
Naples, Presbyterian Church, in northwest corner of front, in water table; bronze tablet stamped "799 DUNKIRK".....	799.561

NAPLES, NORTHWEST ALONG HIGHWAY VIA HUNTS HOLLOW, TO COUNTY CORNER.

Pansy, 1 mile northwest of, 0.3 mile southwest of county corner, west side of road, on north retaining wall of approach to Wm. S. Washburn's barn; bronze tablet stamped "941 DUNKIRK".....	941.698
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NAPLES, EAST ALONG HIGHWAY TO ITALY, THENCE NORTH ALONG ITALY HOLLOW ROAD TO POTTER CENTER.

Italy, Methodist Episcopal Church wall; bronze tablet stamped "1121 DUNKIRK".....	1,121.298
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HUNTS HOLLOW, SOUTH ALONG HIGHWAY TO ATLANTA, THENCE SOUTHEAST ALONG THE ERIE RAILROAD TO COHOCTON.

Atlanta, Presbyterian Church, front wall, in water table; bronze tablet stamped "1317 DUNKIRK".....	1,317.906
Atlanta, at crossing east of station; top of rail.....	1,317.0
Cohocton, Main street crossing; top of rail.....	1,286.5

ITALY, SOUTH TO PRATTSBURG.

Prattsburg, Presbyterian Church, in front wall; bronze tablet stamped "1470 DUNKIRK".....	1,470.637
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ONTARIO, MONROE, GENESEE, WYOMING, LIVINGSTON, AND STEUBEN COUNTIES.

BATAVIA, CANANDAIGUA, CALEDONIA, HONEOYE, NUNDA, AND WAYLAND QUADRANGLES.

The elevations in the following list are based upon the 1903 adjustment. For additional work on Caledonia and Nunda quadrangles see precise-level list, Charlotte to Hornellsville, elsewhere in this bulletin. The leveling on the Canandaigua quadrangle was done partly in

1899 under the direction of Mr. E. B. Clark, topographer, by Messrs. C. H. Semper and W. F. Hammond, levelmen; the remainder of work on the Canandaigua and work on Honeoye. Wayland, and part of Caledonia and Nunda quadrangles was done in 1901 under the direction of Mr. J. H. Jennings, topographer, by Mr. Semper; the remainder on Caledonia having been done in 1902 under the direction of Mr. A. C. Roberts by Mr. Wm. Kelly; the work on the Batavia and part on Nunda quadrangle was done in 1902 under the direction of Mr. W. H. Lovell, topographer, by Mr. Geo. Bailey, levelman, and the remainder on Nunda quadrangle was done in 1903 under Mr. Lovell by Mr. Geo. Seidel, levelman. The standard bench marks set in 1899 were stamped "OSWEGO," and those set in 1901-2 were stamped "ROCHESTER," in addition to figures of elevation.

CANANDAIGUA QUADRANGLE.

CANANDAIGUA, WEST ALONG THE NEW YORK CENTRAL AND HUDSON RIVER RAILROAD, TO EAST BLOOMFIELD.

	Feet.
Canandaigua Lake, at outlet; surface of water.....	685.0
Canandaigua, southwest corner of court-house, in foundation wall; bronze tablet stamped "766 OSWEGO 1899".....	766.916
Holcomb, in front of station; top of rail.....	877
East Bloomfield, southeast corner of hotel; aluminum tablet stamped "1017 OSWEGO 1899".....	1,016.760

MANCHESTER, WEST ALONG THE LEHIGH VALLEY RAILROAD TO FISHERS, THENCE NORTH TO BUSHNELL BASIN.

Tuttles, in top of large boulder 500 feet south of station; bronze tablet stamped "599 OSWEGO 1899".....	599.596
Victor, 1,500 feet east of, in south end of east abutment of railway cattle pass; bronze tablet stamped "559 OSWEGO 1899".....	560.099

WHEELER, SOUTH ALONG HIGHWAY VIA BRAGGVILLE TO BRISTOL CENTER (SINGLE-SPUR LINE).

Bristol Center, northwest corner of Methodist Episcopal Church, in foundation wall; bronze tablet stamped "931 OSWEGO 1899".....	930.898
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POINT 2 MILES EAST OF CANANDAIGUA, SOUTH ON EAST SIDE OF CANANDAIGUA LAKE (SINGLE-SPUR LINE).

Cottage City, on Lake road, east side of Canandaigua Lake, south wall of bridge, in top of east end; bronze tablet stamped "713 OSWEGO 1899".....	713.594
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HONEOYE QUADRANGLE.

EAST BLOOMFIELD, WEST ALONG THE NEW YORK CENTRAL RAILROAD, TO GENESEE VALLEY JUNCTION.

[The error distributed as far as Honeoye Falls is excessive.]

West Bloomfield, in front of station; top of rail.....	776.3
Honeoye Falls, Church street crossing; top of rail.....	668.1
Honeoye Falls, Union Free School, front face of north end; aluminum tablet stamped "657 ROCHESTER 1901".....	656.414
West Rush, 200 feet south of station, west face of hotel, in foundation stone; bronze tablet stamped "571 ROCHESTER 1901".....	570.282
West Rush, 100 feet west of station, road crossing; top of rail.....	557.9
Genesee Valley Junction (Rush Junction), grade crossing of the New York Central and Hudson River and the Erie railroads; top of rail.....	540.8

HONEOYE FALLS, SOUTH ALONG HIGHWAY TO LIVONIA CENTER, THENCE WEST TO LIVONIA, THENCE SOUTH TO SOUTH LIVONIA.

Lima, St. Rose's School, Rochester street, west face of north end; aluminum tablet stamped "849 ROCHESTER 1901".....	849.065
Livonia Center, Lehigh Valley Railroad crossing, near station; top of rail.....	975.9
Livonia Center, Catholic Church, front face of southwest corner; bronze tablet stamped "1093 ROCHESTER 1901".....	1,092.415
Livonia, Main street crossing of Erie Railroad; top of rail.....	1,024
South Livonia, road crossing near station; top of rail.....	1,162.1

LIVONIA CENTER, SOUTH ALONG RAILROAD TO HEMLOCK, THENCE SOUTHEAST ALONG
HIGHWAY TO HONEOYE.

	Feet.
Hemlock, in front of station; top of rail.....	907.8
Honeoye, Congregational Church on Main street in west face; bronze tablet stamped "844 ROCHESTER 1901" (bench mark on a short spur line not checked)	843.433

M'QUEENS CROSSING, ALONG THE ERIE RAILROAD TO LIVONIA.

South Lima, southwest corner of cold-storage building at railroad station; bronze tablet stamped "912 ROCHESTER 1901"	911.607
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WAYLAND QUADRANGLE.

SOUTH LIVONIA, ALONG THE ERIE RAILROAD TO WAYLAND, THENCE EAST TO
ATLANTA.

Webster Crossing, 900 feet north of station, road crossing; top of rail.....	1,339.1
Webster Crossing, Hill & Webster's general store, north face near northeast corner; bronze tablet stamped "1363 ROCHESTER 1901"	1,362.428

POINT 2 MILES EAST OF HEMLOCK, SOUTH ALONG HIGHWAY TO SPRINGWATER.

Canadice, northwest corner of church sheds, at margin of roads, on large rock foundation; aluminum tablet stamped "1569 ROCHESTER 1901"	1,568.855
Tabor Corners, in west face of schoolhouse; aluminum tablet stamped "1863 ROCHESTER 1901"	1,862.338
Springwater, schoolhouse on road to station, in front face at northeast corner; aluminum tablet stamped "970 ROCHESTER 1901"	969.707

WAYLAND, WEST ALONG DELAWARE, LACKAWANNA AND WESTERN RAILROAD, TO
GROVELAND.

Wayland, in west face of Lackawanna schoolhouse; aluminum tablet stamped "1372 ROCHESTER 1901"	1,370.722
Wayland, road crossing near Delaware, Lackawanna and Western station; top of rail.....	1,360.5
Dansville, in front of station; top of rail.....	1,025.1
Dansville, station of Delaware, Lackawanna and Western Railroad, southeast corner of foundation; aluminum tablet stamped "1024 ROCHESTER 1901"	1,022.980

CALEDONIA QUADRANGLE.

AVON, ALONG THE ERIE RAILROAD, TO M'QUEENS CROSSING.

Avon, 0.57 mile south of station, on Bath branch of Erie Railroad, bridge over highway, in west end of south abutment; bronze tablet stamped "609 ROCHESTER"	608.977
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GENESEE VALLEY JUNCTION, SOUTH ALONG THE ERIE RAILROAD, TO MOUNT MORRIS.

Avon, west side of station; platform.....	584.0
Ashantee, in front of station and creamery; top of rail.....	579.8
South Avon, road crossing near station; top of east rail.....	614.3
Geneseo, in front of station; top of east rail.....	596.2
Geneseo, 60 feet east of Erie freight house, 5 feet south of northwest corner of Delehanty's warehouse, in west face of foundation wall; aluminum tablet stamped "602 ROCHESTER"	602.290
Cuylerville, road crossing; top of east rail.....	579.2

AVON, WEST ALONG THE ERIE RAILROAD VIA CALEDONIA, TO LEROY.

Avon, 1.75 miles west of, bridge over Pennsylvania Railroad; top of rail.....	557.4
Caledonia, John Ball's storehouse opposite station, in northerly face of foundation wall; aluminum tablet stamped "669 ROCHESTER"	668.399
Leroy, junction of the Erie and the Buffalo, Rochester and Pittsburg railroads; top of rail..	862.50
Leroy, "Church crossing" of Erie Railroad, at southwest corner of, at northeast corner of malthouse lettered "D," in easterly face; bronze tablet stamped "869 ROCHESTER"	868.385

MOUNT MORRIS, NORTHWEST ALONG THE DELAWARE, LACKAWANNA AND WESTERN
RAILROAD VIA GREIGSVILLE, TO LINWOOD.

Leicester, foundation wall of town hall, set in easterly face, 12 feet from northeast corner; bronze tablet stamped "661 ROCHESTER"	660.404
Leicester, highway crossing; north rail.....	656.2

^a Schoolhouse rebuilt in 1905 and tablet set at same elevation.

	Feet.
Greigsville, in front of station; top of north rail.....	762.0
Craigs, highway crossing; top of north rail.....	865.0
Craigs, 50 feet west of station, on north side of track, near southwest corner of foundation wall of storehouse, on southerly face; bronze tablet stamped "866 ROCHESTER".....	865.088
Linwood, in front of station; north rail.....	933.2

NUNDA QUADRANGLE.

GROVELAND, ALONG THE DELAWARE, LACKAWANNA AND WESTERN RAILROAD, TO MOUNT MORRIS.

Groveland, first crossing east of station, north side of Delaware, Lackawanna and Western Railroad, in top of wall of cottage just east of steps; bronze tablet stamped "601 ROCHESTER".....	600.780
Groveland, in front of station; top of rail.....	588.9
Mount Morris, grade crossing of the Erie and the Delaware, Lackawanna and Western railroads; top of rail.....	574.2
Mount Morris 1 mile north of, Delaware, Lackawanna and Western junction, grade crossing of Western New York and Pennsylvania Railway; top of north rail.....	587.6

MOUNT MORRIS, WEST ALONG PUBLIC ROAD TO GIBSONVILLE (SINGLE-SPUR LINE).

Mount Morris. Scoville House, in doorsill at north side of front entrance; bronze tablet stamped "627 ROCHESTER".....	627.144
Gibsonville, at road forks near old store, in bowlder sunk in ground; bronze tablet stamped "726 ROCHESTER".....	726.182

CANASERAGA, NORTH ALONG PUBLIC ROAD TO OSSIAN (SINGLE-SPUR LINE).

Ossian, east corner of foundation wall of Dr. T. H. Lamont's residence; aluminum tablet stamped "1345 ALBANY 1903".....	1,343.826
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BATAVIA QUADRANGLE.

LEROY, WEST ALONG THE NEW YORK CENTRAL RAILROAD TO BATAVIA, THENCE SOUTH TO ATTICA.

Stafford, crossing just west of station; top of north rail.....	900.4
Batavia (Attica branch of New York Central), 0.5 mile from station, in northeast abutment of railroad bridge; bronze tablet stamped "893 ROCHESTER".....	892.386

ATTICA, ALONG THE ERIE RAILROAD EAST TO LINDEN, THENCE SOUTH TO WARSAW.

Dale, 0.25 mile north of station, in southeast abutment of railroad bridge over highway; bronze tablet stamped "1208 ROCHESTER".....	1,207.654
Dale, in front of station; top of rail.....	1,215.0
Warsaw, 1 mile north of, 400 feet north of intersection with road north and south, in east wall of pipe culvert; aluminum tablet stamped "1008 ROCHESTER".....	1,008.684

WARSAW, NORTH ALONG THE BUFFALO, ROCHESTER AND PITTSBURG RAILWAY, VIA PEARL CREEK AND PAVILION CENTER, TO LEROY.

Pearl Creek, 800 feet north of station, southeast abutment of railroad bridge over creek; bronze tablet stamped "954 ROCHESTER".....	954.333
Pavilion Center, 400 feet south of, bridge over highway, in top of west end of north wall; bronze tablet stamped "953 ROCHESTER".....	953.237
Leroy, West Main street crossing; top of rail.....	887.0

ALLEGANY, ERIE, GENESEE, LIVINGSTON, AND WYOMING COUNTIES.

ANGELICA, ATTICA, BUFFALO, DEPEW, FRANKLINVILLE, AND PORTAGE QUADRANGLES.

The elevations in the following list are based upon the 1903 adjustment of the precise-level net. The leveling was done in 1903 under the direction of Mr. J. H. Jennings, topographer, except a portion on Angelica quadrangle, which was done under the direction of Mr. W. H. Lovell, topographer, by Mr. Geo. Seidel, levelman. All standard bench marks are stamped with the letters "ALBANY" in addition to the figures of elevation.

ATTICA QUADRANGLE.

ATTICA, ALONG RAILROAD SOUTH TO VARYSBURG, THENCE ALONG HIGHWAY WEST TO HARRIS.

	Feet.
Attica, 0.2 mile west of station, on south side of Erie Railroad, in east abutment of railroad bridge; bronze tablet stamped "990 ROCHESTER".....	990.187
Arcade, railroad crossing; top of rail.....	974.
Varysburg, southeast corner of foundation wall of Baptist Church; bronze tablet stamped "1113 ALBANY 1903".....	1,113.072
Harris, north side of road, about 35 feet south of T. Dorshide's hotel, in large rock; bronze tablet stamped "1306 ALBANY 1903".....	1,305.795

CRITTENDEN, EAST ALONG THE NEW YORK CENTRAL AND HUDSON RIVER RAILROAD TO CORFU, THENCE ALONG HIGHWAY TO DARIEN, THENCE EAST ALONG RAILROAD TO ATTICA.

Crittenden, 0.2 mile east of; New York Central Railroad bench mark at milestone 419.....	846.89
Crittenden, 1.2 miles east of; New York Central Railroad bench mark at milestone 418.....	856.00
Corfu, 2.1 miles west of; New York Central Railroad bench mark at milepost 417.....	878.36
Corfu, 1.1 miles west of; New York Central Railroad bench mark at milestone 416.....	873.28
Corfu, 0.1 mile west of; New York Central Railroad bench mark at milestone 415.....	862.92
Corfu, southwest corner of foundation wall of Catholic Church; bronze tablet stamped "854 ALBANY 1903" (bench mark on single-spur line).....	854.445
Lehigh Valley Railroad crossing; top of rail.....	878
Delaware, Lackawanna and Western Railroad crossing; top of rail.....	909
Darien Center, southeast corner of foundation wall of Allegheny Hotel; aluminum tablet stamped "1011 ALBANY 1903".....	1,011.207
Darien, Erie Railroad station; top of rail.....	1,011.8
Griswold, 500 feet southwest of station, north side of track; coping stone of abutment of railroad bridge.....	1,032.86
Griswold, road crossing at station; top of rail.....	1,036

DEPEW QUADRANGLE.

DARIEN, WEST ALONG ERIE RAILROAD TO ALDEN.

Alden, in foundation of standpipe of village waterworks; aluminum tablet stamped "865 ALBANY 1903".....	865.582
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HARRIS, ALONG HIGHWAY WEST TO ORCHARD PARK.

Wales Center, 2.2 miles east of; north end of west abutment of iron bridge.....	1,045.70
Wales Center, 150 feet east of covered bridge, northeast corner of foundation wall of George Kelter's residence; aluminum tablet stamped "898 ALBANY 1903".....	897.753
East Aurora, in brick wall to left of main entrance of schoolhouse; aluminum tablet stamped "926 ALBANY 1903".....	926.235
East Aurora, 1.5 miles west of, iron bridge across Cazenovia Creek; end of west abutment....	832.61
Orchard Park, southeast corner of Briggs Brothers block, in brick foundation; aluminum tablet stamped "868 ALBANY 1903".....	868.933

EAST AURORA, NORTHWEST ALONG THE PENNSYLVANIA RAILROAD AND HIGHWAY TO EBENEZER.

Elma station, Elma Center post-office road crossing; top of rail.....	814.2
Spring Brook, railroad crossing; top of rail.....	748
Blossom (Upper Ebenezer), in foundation wall of schoolhouse, District No. 8; aluminum tablet stamped "672 ALBANY 1903".....	672.087

WILLIAMSVILLE, EAST ALONG PUBLIC ROAD VIA CLARENCE TO MILLGROVE.

Williamsville, northwest corner of foundation wall of Mansion House; bronze tablet stamped "665 ALBANY 1903".....	665.022
Clarence, main entrance of Parker High School; aluminum tablet stamped "752 ALBANY 1903".....	752.704
Millgrove, 1.1 miles north of; east end of north abutment of small bridge.....	777.45

MILLGROVE ALONG THE NEW YORK CENTRAL RAILROAD TO CRITTENDEN.

Wende, road crossing at station; top of rail.....	791
Wende, 1.1 miles east of station; New York Central Railroad bench mark at milepost 421.....	811.38
Crittenden, 0.8 mile west of; New York Central Railroad bench mark at milestone 420.....	825.56

^a This elevation is by a single line from a checked elevation at Big Tree, which is nearer than East Aurora, from which also by single line an elevation 0.9 foot less was derived.

BUFFALO QUADRANGLE.

EBENEZER, NORTH ALONG HIGHWAY TO WILLIAMSVILLE.

	Feet.
Ebenezer, railroad crossing at station; top of rail.....	636.3
Gardenville, 100 feet north of iron bridge at street crossing; rock on northwest corner.....	630.57
Erie Railroad crossing; top of rail.....	636
Delaware, Lackawanna and Western Railroad crossing; top of rail.....	641
Forks, 0.2 mile west of station, south side of New York Central tracks, Evangelical Church, to right of main entrance, in foundation wall; bronze tablet stamped "662 ALBANY 1903".....	662.079
New York Central Railroad bench mark at milepost 433.....	657.69
New York Central Railroad bench mark at monument No. 90.....	654.75

PORTAGE QUADRANGLE.

NUNDA, WEST ALONG THE PENNSYLVANIA RAILROAD TO PORTAGE, THENCE NORTH
ALONG THE ERIE RAILROAD TO SILVER LAKE JUNCTION, THENCE NORTHEAST
ALONG THE SILVER LAKE RAILWAY TO PERRY, THENCE WEST OVER PUBLIC
ROAD TO SOUTH WARSAW, THENCE NORTH ALONG THE BUFFALO,
ROCHESTER AND PITTSBURG RAILWAY TO WARSAW.

Portageville post-office, west end of south abutment of Pennsylvania Railroad bridge across Genesee River; bronze tablet stamped "1131 ALBANY 1903".....	1,131.174
Castile, southwest corner of coping stone of water plug; bronze tablet stamped "1395 ALBANY 1903".....	1,394.847
Castile, in front of station; top of rail.....	1,395
Summit, highest point of Erie Railroad (Buffalo division); top of rail.....	1,424.4
Silver Springs, road crossing at station; top of rail.....	1,402
Silver Lake Junction, about 500 feet west of, north side of Erie track, in pier of Buffalo, Rochester and Pittsburgh Railway bridge; bronze tablet stamped "1401 ALBANY 1903" (on single-spur line).....	1,401.533
Chace station, road crossing; top of rail.....	1,370
Fairview, in front of station; top of rail.....	1,364
Perry, road crossing; top of rail.....	1,366
Perry, north end of west abutment of railroad bridge at station, in top stone; bronze tablet stamped "1362 ALBANY 1903".....	1,362.365
South Warsaw, north end of east abutment of bridge across Oatka Creek; bronze tablet stamped "1066 ALBANY 1903".....	1,065.823
Warsaw, road crossing at station; top of rail.....	1,116

SOUTH WARSAW, WEST ALONG PUBLIC ROAD TO WETHERSFIELD SPRINGS, THENCE
SOUTH VIA HARDYS TO PIKE, THENCE EAST TO PORTAGE.

Wethersfield Springs, culvert at west side of road; top of stone.....	1,720.606
Hermitage, 250 feet north of road leading to Gainesville, 300 feet west of East Koy Creek, 200 feet north of Blodgett's office, in bowl der; bronze tablet stamped "1658 ALBANY 1903".....	1,658.056
Hardys, in front of station; top of rail.....	1,686.1
Pike Five Corners; west end of south abutment of iron bridge.....	1,595.769
Pike, iron bridge across Wiscocy Creek, about center of east abutment, north side of driveway; bronze tablet stamped "1546 ALBANY 1903".....	1,545.986

ANGELICA QUADRANGLE.

PORTAGE, SOUTHWEST ALONG THE PENNSYLVANIA RAILROAD TO CUBA.

Fillmore, main entrance of Dingman House, coping stone of stone wall; aluminum tablet stamped "1213 ALBANY 1903".....	1,213.069
Houghton, road crossing at station; top of rail.....	1,210
Caneadea, 0.6 mile north of, west side of track, old canal lock; foundation rock.....	1,228.856
Caneadea, road crossing; top of rail.....	1,238
Caneadea, 500 feet south of station, west end of north abutment of railroad bridge; aluminum tablet stamped "1236 ALBANY 1903".....	1,236.916
Oramel, road crossing at station; top of rail.....	1,264
Belfast, 2.1 miles south of, west side of track at railroad crossing; top stone of culvert.....	1,350.810
Black Creek, road crossing at station; top of rail.....	1,489
Black Creek, southwest corner of foundation wall of Congregational Church; aluminum tablet stamped "1517 ALBANY 1903".....	1,517.944

CANEADEA, EAST ALONG PUBLIC ROAD TO ALLEN CENTER (SINGLE-SPUR LINE).

Allen Center, 0.2 mile west of, north side of road, in foundation wall of Wm. Burk's residence; aluminum tablet stamped "1636 ALBANY 1903".....	1,636.169
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BELFAST, SOUTHEAST ALONG PUBLIC ROAD TO BELVIDERE, THENCE ALONG ERIE
RAILROAD TO BELMONT.

	Feet.
Belfast, corner of Main street, northeast corner of foundation to Belfast House; aluminum tablet stamped "1313 ALBANY 1903".....	1,313.140
Angelica, crossing at station; top of rail.....	1,440
Angelica, foundation of Shawmut railroad office building, on Depot street; aluminum tablet stamped "1440 ALBANY 1903" (on single-spur line).....	1,439.990
Belvidere, foundation wall under bay window of Mrs. S. H. Whitcomb's residence; aluminum tablet stamped "1371 ALBANY 1903".....	1,371.272

FRANKLINVILLE QUADRANGLE.

CANEADEA, WEST ALONG PUBLIC ROAD TO RUSHFORD (ON SPUR LINE).

Rushford, northeast corner of foundation wall of schoolhouse; aluminum tablet stamped "1517 ALBANY 1903".....	1,517.343
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ALLEGANY AND CATTARAUGUS COUNTIES.

BELMONT, OLEAN, AND SALAMANCA QUADRANGLES.

The elevations in the following list result from a readjustment of leveling reported in the Appendixes to the Eighteenth and Twentieth Annual Reports of the Director, United States Geological Survey. For additional elevations on these quadrangles refer to "Precise-level line Dunkirk to Albany." The leveling on Olean and Belmont quadrangles was done in 1896 under the direction of Mr. F. Sutton, topographer; that on Salamanca quadrangle was done in 1897 under the direction of Mr. J. H. Jennings, topographer, both by Mr. E. L. McNair, topographer. The standard bench marks on Olean and Belmont quadrangles are stamped with figures of elevation, mostly 7 feet too great, and without datum letters, and those on Salamanca quadrangle were stamped with letter "S," and figures of elevation 5 feet too great. These errors are due to the erroneous railroad datums used when field work was done.

BELMONT QUADRANGLE.

CUBA SOUTHEAST TO CLARKSVILLE.

	Feet.
Clarksville, at M. M. Congdon's residence, in stone horse block; copper bolt stamped "U. S. G. S. B. M. 1604 ft.".....	1,596.063

OLEAN QUADRANGLE.

OLEAN, SOUTHEAST TO PORTVILLE, THENCE NORTHEAST TO CLARKSVILLE.

Olean, in front of Western New York and Pennsylvania Railway station; top of rail.....	1,428.5
Olean, city building, Union street side, in foundation stone just beneath water table in north-west corner of building; bronze tablet stamped "1459".....	1,451.790
Westons Mills, Haskell Creek highway bridge, near southeast corner of east abutment; top of coping stone.....	1,425.79
Allegheny River highway bridge; west end of north abutment.....	1,433.05
Portville, in front of Western New York and Pennsylvania Railway station; top of rail.....	1,436.4
Portville, Presbyterian Church, in upper stone step at entrance; copper bolt stamped "U. S. G. S. B. M. 1438 Ft.".....	1,432.143
Obi, 1 mile southwest of, Seventh Day Baptist Church, 85 feet from church doors, 10 feet from center of road, 3 feet from fence, on land belonging to Mrs. E. B. Adams, in large flat rock, on west side of road; copper bolt stamped "U. S. G. S. B. M. 1547 ft.".....	1,539.910

OLEAN, NORTH VIA HINSDALE TOWARD ISCHUA.

Hinsdale, 1.5 miles south of Olean Creek Bridge, Faye Hollow highway, in capstone of bridge foundation; copper bolt stamped "U. S. G. S. B. M. 1449 ft.".....	1,442.079
Scott, 2.1 miles north of, west side of Hinsdale-Ischua road, in base of stone wall, under south side of barn of Harris Johnson, in large flat stone; copper bolt stamped "U. S. G. S. B. M. 1544 Ft.".....	1,536.378

SALAMANCA QUADRANGLE.

SOUTH VANDALIA, SOUTHEAST THROUGH CHIPMUNK OIL FIELDS, TO KNAPP CREEK.

Chipmunk, 0.8 mile south of, 55 feet south of road east and 140 feet north of M. Kelly's white house, 2 feet outside of fence on west side of road; copper bolt in boulder stamped "1529 Ft. S.".....	1,524.144
Knapp Creek, in front of electric-railroad station; top of rail.....	2,342.1

CARROLLTON, SOUTH VIA LIMESTONE TO NEW YORK-PENNSYLVANIA STATE LINE.

	Feet.
South Carrollton, 1.2 miles south of, iron highway bridge crossing Allegheny River, on bridge abutment 8 feet from southeast corner; chiseled square.....	1,397.23
South Carrollton, 2 miles south of, 4 miles north of Limestone, in large boulder nearly buried in ground on west side of road, between it and ditch, near entrances to pasture fields on each side of road; copper bolt stamped "1410 Ft. S".....	1,405.718
Limestone, 2 miles south of, 9 feet from southwest corner of iron bridge over stream just inside State line, in stone abutment; chiseled square.....	1,413.47
Limestone, 2.3 miles south of, on west side of road, near oil derrick, opposite telephone pole 6050, on top of State-line monument; chiseled square.....	1,450.83

KILLBUCK, NORTHEAST TO GREAT VALLEY, THENCE EAST TO HUMPHREY.

Killbuck, 3.9 miles north of, at southwest corner of iron bridge across Wrights Creek at about 0.25 mile above its junction with Great Valley Creek, in stone abutment; copper bolt stamped "1456 Ft. S".....	1,451.923
Great Valley, 2.52 miles southeast of, northwest corner of iron bridge across Wrights Creek, near a white church, on stone abutment; chiseled square.....	1,513.61
Humphrey, 1.7 miles west of, 4 feet from southeast corner of iron bridge across Wrights Creek, on stone abutment; chiseled square.....	1,548.98
Humphrey, W. J. Sherman's hotel, in stone doorstep in front of porch, west side; copper bolt stamped "1626 Ft. S".....	1,621.444

CATTARAUGUS AND CHAUTAUQUA COUNTIES.

CHAUTAUQUA, CHERRY CREEK, CLYMER, DUNKIRK, JAMESTOWN, NORTHEAST, REDHOUSE, AND WESTFIELD QUADRANGLES.

The elevations in the following list are based upon an aluminum tablet in the water table of St. Mary's Home and School at Dunkirk, the elevation of which is now accepted as 598.937 feet above mean sea level. A portion of the work here given was previously reported in the Appendix to the Twentieth Annual Report of the Director United States Geological Survey, pages 310-313. For additional elevations on Cherry Creek and Redhouse quadrangles see "Precise leveling."

The leveling on Dunkirk, Cherry Creek, and Westfield quadrangles was done in 1898 under the direction of Mr. Frank Sutton, topographer, by Mr. E. L. Faison, levelman; that on Clymer, Chautauqua, and most of Jamestown quadrangles was done in 1902 under the direction of Mr. A. C. Roberts, topographer, by Mr. G. M. Dimmick, levelman, except part on Chautauqua quadrangle done by Mr. Wm. Kelley, levelman; and work on Redhouse and the remainder on Chautauqua quadrangle was done in 1903 under the direction of Mr. W. H. Lovell, topographer, by Mr. Geo. Seidel, levelman. All standard bench marks are stamped with "D" or "DUNKIRK" in addition to figures of elevation.

DUNKIRK QUADRANGLE.

DUNKIRK TO FREDONIA, ALONG THE DUNKIRK, ALLEGHENY VALLEY AND PITTSBURG RAILROAD.

	Feet.
Dunkirk, extreme northwest corner of Nelson block; top of water table.....	588.866
Dunkirk, Elk street crossing of Lake Shore and Michigan Southern Railway; top of rail....	594.6
Dunkirk, 2 miles south of, Dunkirk, Allegheny Valley and Pittsburg Railroad culvert No. 3; extreme northwest corner.....	664.37
Fredonia, in front of Dunkirk, Allegheny Valley and Pittsburg Railroad station; top of rail.	767.8

FREDONIA, VIA LAONA, LILLYDALE, CASSADAGA, AND STOCKTON, TO MAYVILLE.

Laona, on west side of railroad bridge over Canadaway Creek, in top stone of north abutment; bronze tablet stamped "817 D".....	817.926
Lillydale, 1.5 miles north of, southwest corner of abutment, south end of Skidmore viaduct; chiseled square.....	1,295.60
Lillydale, in front of Dunkirk, Allegheny Valley and Pittsburg station; top of rail.....	1,312.9
Stockton, 500 feet west of Chriss's Hotel, east side of stone foundation of blacksmith shop on Mayville street, 4 feet above ground; bronze tablet stamped "1316 D".....	1,317.521
Mayville, at Jamestown Junction, west side of cemetery, highway bridge over Black Brook, in top stone at north end of east abutment; bronze tablet stamped "1324 D".....	1,324.865
Mayville, top of bottom step of front of court-house; chiseled square.....	1,462.49

	Feet.
Mayville, schoolhouse grounds, in north meridian monument; bronze tablet stamped "1500 D (?) "	1,500.670
Mayville, schoolhouse grounds, in south meridian monument; bronze tablet stamped "1499 D" (?)	1,499.500

JAMESTOWN JUNCTION, SOUTHEAST ALONG THE JAMESTOWN, CHAUTAUQUA AND
LAKE ERIE RAILWAY, TO WOOLGILN.

Hartfield; top of station platform	1,315.7
Wooglin, in front of station; top of south rail	1,350.2

WEST PORTLAND, NORTHEAST VIA BROCTON TO FREDONIA.

West Portland, on northeast corner of second step of red brick church; cross mark	774.75
Brocton, at crossing of Western New York and Pennsylvania Railway; top of rail	745.1
Brocton, 1 mile north of, 0.25 mile east of station, in south side of center pier of double arch (stone) of Lake Shore Railway bridge over Slippery Rock Creek; copper bolt stamped "667 D"	668.518
Fredonia, south entrance to clothing store in Columbia Hotel; top of south stone step	728.52

CHERRY CREEK QUADRANGLE.

CASSADAGA, EAST TO CHERRY CREEK.

Charlotte Center, 1.6 miles east of, 640 feet east of road turning off south, in stone 12 feet north of road, 6 inches above ground; copper bolt stamped "1915 D"	1,915.887
Cherry Creek, in west side of north abutment of Main street iron bridge over Cherry Creek; copper bolt stamped "1309 D"	1,310.510
Cherry Creek, 400 feet south of station, northwest corner of abutment of plate-girder bridge over Erie Railroad; cross mark on top	1,293.77

CHERRY CREEK, NORTHWEST VIA ARKWRIGHT TO LAONA.

Arkwright Center, 0.9 mile east of, 15 feet north of center of road, large stone in place, 2 feet above ground; copper bolt stamped "1570 D"	1,571.006
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WESTFIELD QUADRANGLE.

MAYFIELD, NORTH TO PROSPECT, THENCE WEST TO WESTFIELD, THENCE NORTHEAST
TO WEST PORTLAND.

Prospect, foundation of Western New York and Pennsylvania Railway station, in north-east corner; bronze tablet stamped "1213 D"	1,214.183
Westfield, in northwest corner of masonry foundation of public-school building, 2.5 feet above ground; bronze tablet stamped "748 D"	748.900

MAYVILLE, WEST TO VOLUSIA.

Volusia, foundation of Methodist Church, in front face of south side; bronze tablet stamped "1557 DUNKIRK 1902"	1,556.785
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REDHOUSE QUADRANGLE.

KENNEDY, EAST ALONG RAILROAD TO RANDOLPH (SINGLE-SPUR LINE).

Randolph, west end of north abutment of bridge west of station, top stone; bronze tablet stamped "1298 DUNKIRK"	1,298.010
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JAMESTOWN QUADRANGLE.

JAMESTOWN, NORTHEAST ALONG THE ERIE RAILROAD TO CHERRY CREEK.

Jamestown, 1.42 miles east of, railroad bridge over Chautauqua Outlet, on center of west abutment; square	1,302.34
Kennedy, 750 feet south of station, east end of north abutment of Erie Railroad bridge; bronze tablet stamped "1257 DUNKIRK 1902"	1,257.353
Kennedy, in front of station; top of east rail	1,260.6
Conewango, in front of station; top of east rail	1,282.8
Conewango, residence of Doctor Smith, north face, east end, in foundation wall; bronze tablet stamped "1293 DUNKIRK 1902"	1,293.321

FALCONER, NORTH ALONG THE DUNKIRK, ALLEGHENY VALLEY AND PITTSBURG RAIL-
ROAD, TO GERRY, THENCE ALONG HIGHWAY EAST TO ELLINGTON.

Falconer, 500 feet south of station, top of east end of north abutment of bridge; aluminum tablet stamped "1258 DUNKIRK 1902"	1,257.717
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	Feet.
Gerry, in front of station; top of east rail.....	1,296.1
Gerry, in foundation wall of schoolhouse, District No. 1, 9 feet from southeast corner, east face; bronze tablet stamped "1309 DUNKIRK 1902".....	1,308.725
Ellington, foundation wall of Congregational Church, in north face of east end; bronze tablet stamped "1380 DUNKIRK 1902".....	1,379.945

JAMESTOWN, SOUTHEAST ALONG HIGHWAY VIA Kiantone TO FENTONVILLE (CHECKED BY LINE FROM PENNSYLVANIA).

Kiantone (6 miles southeast of Jamestown), in foundation wall of church, center of south face; aluminum tablet stamped "1493 DUNKIRK".....	1,493.126
Fentonville, road crossing; top of rail.....	1,248
Fentonville, 500 feet east of station, northwest corner of foundation wall of Ira Adam's house; bronze tablet stamped "1255 DUNKIRK".....	1,255.414

CHAUTAUQUA QUADRANGLE.

WOOLGLIN, SOUTHEAST ALONG THE JAMESTOWN, CHAUTAUQUA AND LAKE ERIE RAILWAY, VIA CHAUTAUQUA POINT, TO JAMESTOWN.

Chautauqua Point, in front of station; top of south rail.....	1,323.2
Dewittville, in front of station; top of south rail.....	1,314.3
Dewittville, foundation wall of Methodist Church, 7.5 feet west of southeast corner, in southern side; bronze tablet stamped "1319 DUNKIRK".....	1,319.864
Starr Farm, in front of station; top of south rail.....	1,314.4
Midway Grove; top of south rail.....	1,317.7
Midway, highway crossing near station; top of south rail.....	1,319.8
Warners, in front of station; top of south rail.....	1,315.0
Giffords, in front of station; top of south rail.....	1,313.0
Bay View, in front of station platform; top of south rail.....	1,323.0
Benus Point, in front of station; top of south rail.....	1,358.8
Benus Point, 440 feet south of station, west side of Cemetery street, on the southerly side of A. G. Barrett's residence, in foundation wall of bay window; bronze tablet stamped "1345 DUNKIRK".....	1,345.529
Phillips Mills, in front of station; top of south rail.....	1,316.6
Colburns, in front of station; top of south rail.....	1,321.0
Bellevue, in front of station; top of south rail.....	1,321.6
Driftwood, in front of station; top of south rail.....	1,323.5
Griffith, in front of station; top of south rail.....	1,318.9
Greenhurst, in front of station; top of south rail.....	1,324.3
Fluvanna, in front of station; top of south rail.....	1,313.0
Fluvanna, Chautauqua Lake, June 13, 1902; water surface.....	1,308
Jamestown, Isabella avenue; top of south rail.....	1,311.3

BEMUS POINT, ALONG HIGHWAY NORTHEAST TO ELLERY (SINGLE-SPUR LINE).

Ellery, Cowden Brothers' store, in foundation wall, north face; bronze tablet stamped "1758 DUNKIRK 1902".....	1,758.450
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JAMESTOWN, SOUTHWEST ALONG THE ERIE RAILROAD TO BROKENSTRAW (GRANT STATION), THENCE NORTH ALONG HIGHWAY TO PANAMA, THENCE WEST TO NORTH CLYMER.

Jamestown, 3,750 feet west of, north end of west abutment of Erie Railroad bridge over Chautauqua Outlet, in top step but one; bronze tablet stamped "1324 DUNKIRK 1902".....	1,324.462
Lakewood, highway crossing near station; top of north rail.....	1,352.1
Lakewood, post-office, on east side of Chautauqua avenue, 4 feet east of southwest corner of R. H. Maxim's building (post-office), on south side; aluminum tablet stamped "1362 DUNKIRK".....	1,361.810
Ashville, in front of station; north rail.....	1,353.3
Watts Flats, in front of station; top of north rail.....	1,452.7
Brokenstraw, 3.18 miles northwest of, bridge over Brokenstraw Creek, on east end of north abutment; chiseled square.....	1,465.04
Panama, Hotel Berny, north face, east corner, in water table; aluminum tablet stamped "1551 DUNKIRK".....	1,550.667

CLYMER QUADRANGLE.

CLYMER, NORTH ALONG THE WESTERN NEW YORK AND PENNSYLVANIA RAILWAY, TO
MAYVILLE.

	Feet.
Clymer, in front of station; top of east rail.....	1,472.1
North Clymer, east end of foundation wall of Methodist Episcopal Church, south face; bronze tablet stamped "1582 DUNKIRK 1902".....	1,582.091
Panama (North Clymer), in front of station; top of east rail.....	1,562.0
Sherman, in front of station; top of north rail.....	1,581.5
Summerdale, at highway crossing; top of east rail.....	1,638.7
Mayville, in front of station; top of east rail.....	1,314.2
Mayville, Chautauqua Lake; water surface.....	1,310

SHERMAN STATION, WEST TO SHERMAN (SINGLE-SPUR LINE).

Sherman, 0.72 mile west of station, highway bridge over Finch Creek, west end of north abutment; bronze tablet stamped "1538 DUNKIRK 1902".....	1,538.226
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CLYMER, WEST ALONG HIGHWAY TO MARVIN, THENCE NORTH TO POINT 9 MILES NORTH
OF FINDLAY LAKE, THENCE INDIRECTLY EASTWARD TO POINT
3 MILES WEST OF MAYVILLE.

Clymer, 1.3 miles west of station, west end of foundation wall of Baptist Church, front face; bronze tablet stamped "1468 DUNKIRK 1902".....	1,468.349
Marvin, 0.6 mile north of, highway bridge over Finch Creek, top of north end of west abutment; bronze tablet stamped "1388 DUNKIRK 1902".....	1,387.907
Findley Lake, Aug. 9, 1903; water surface.....	1,421
Findley Lake, west corner of foundation wall of Methodist Church, in front face; aluminum tablet stamped "1429 DUNKIRK 1902".....	1,428.655

NORTHEAST QUADRANGLE.

Stateline (village), 2.2 miles south of, 1,000 feet south of three corners, in east end of north abutment of small bridge; bronze tablet stamped "1293 DUNKIRK 1902".....	1,293.049
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GENESEE AND MONROE COUNTIES.

BROCKPORT AND HAMLIN QUADRANGLES.

The elevations published in the following list are based on a bronze tablet set in the foundation wall of the Normal School at Brockport and stamped "B 538." The elevation of this bench mark above mean sea level is derived from the nearest bench mark of the State engineer. The height of this bench mark is now accepted as 539.231 feet above mean sea level. The work was previously reported upon in the Appendix to the Nineteenth Annual Report of the Director, United States Geological Survey.

The leveling was done in 1897 under the direction of Messrs. J. H. Jennings and E. B. Clark, topographers, by Mr. E. L. McNair, levelman. The standard bench marks are stamped with the letter "B" in addition to figures of elevation.

HAMLIN QUADRANGLE.

BROCKPORT, NORTH TO HAMLIN, THENCE EAST TO HILTON, THENCE SOUTH TO SPENCERPORT.

	Feet.
Hamlin, Hamlin House, 6 feet from southwest corner, in ground inside fence; iron post stamped "B 337".....	337.707
Hilton, house of Dr. J. J. Williams, in foundation wall under bay window; bronze tablet stamped "B 284".....	285.259

BROCKPORT QUADRANGLE.

AT SPENCERPORT.

Spencerport, Amity street, Bridge No. 99, in center of abutment facing towpath and canal; bronze tablet stamped "514 B".....	514.749
Spencerport, New York Central and Hudson River Railroad station; southeast corner of door step at east end of building.....	528.96
Spencerport, at east end of New York Central and Hudson River Railroad station; top of rail.....	526.3

BROCKPORT, SOUTH TO POINT 1 MILE SOUTH OF SWEDEN CENTER.

	Feet.
Brockport, east end of towpath abutment of Park avenue canal bridge; lower step (Erie Canal B. M. No. 107, State engineer's B. M. No. 475).....	510.690
Brockport Normal School, in foundation wall in front of office; bronze tablet stamped "538 B".....	539.231
Brockport water tower, on stone foundation, west side; chiseled square.....	607.83
Sweden Center, 1 mile south of, at Geo. W. Way's residence, in foundation wall under bay window; bronze tablet stamped "639 B".....	640.191

SPUR LINES FROM CORRECTED RAILROAD LEVELS OF DOUBTFUL VALUE.

AT BERGEN.

Bergen, West Shore Railroad crossing; top of rail.....	580.4
Bergen, New York Central and Hudson River Railroad station; top of rail.....	604.1
Bergen, New York Central and Hudson River Railroad station, in doorstep of baggage room; bronze tablet stamped "604 B".....	604.959

SOUTHWARD FROM CHILI STATION (NEW YORK CENTRAL RAILROAD).

Chili station, 380 feet east of, south side of main line of New York Central and Hudson River Railroad, in south end of old culvert abutment at southwest corner of flagman's shanty; bronze tablet stamped "561 B".....	562.174
Chili station, 2.5 miles south of, 1.25 miles south of Buckbee Corner, under southeast corner of dwelling house of John Groves, west of road, in foundation wall; bronze tablet stamped "558 B".....	559.471

AT CHURCHVILLE.

Churchville, 800 feet east of station; west abutment of New York Central and Hudson River Railroad bridge No. 721 (railroad company's bench mark).....	504.57
Churchville, in front of New York Central and Hudson River Railroad station; top of rail....	509.0
Churchville, West Shore Railroad crossing; top of rail.....	569.6
Churchville, Union School building, at right side of main entrance; bronze tablet stamped "615 B".....	615.633

ERIE, GENESEE, NIAGARA, AND ORLEANS COUNTIES.

ALBION, LOCKPORT, MEDINA, OAK ORCHARD, OLCOTT, AND RIDGEWAY QUADRANGLES.

The elevations in the following list are based upon a bronze tablet set in the front wall, east of door of Niagara street entrance to Niagara County court-house, at Lockport, stamped "616." The elevation of this bench mark, 615.183 feet above mean sea level, is based on the nearest State engineer's bench mark. This list was previously published in the Appendix to the Eighteenth Annual Report of the Director, United States Geological Survey. The elevations there listed have been corrected by the addition of about 1 foot. The leveling was done in 1896 under the direction of Mr. Frank Sutton, topographer, by Mr. E. L. McNair, levelman. The standard bench marks are stamped without datum letters, but with figures of elevation mostly 1 foot too great.

OLCOTT QUADRANGLE.

LOCKPORT, NORTH 6.5 MILES, THENCE EAST TO HARTLAND, THENCE SOUTH TO GASPORT.

	Feet.
Ridgeroad, 1.5 miles northwest of, on road running east and west, 3 miles north of Wrights Corners, District No. 16, 30 feet southeast of schoolhouse, on granite boulder, copper bolt stamped "363 ft.".....	362.466
Hartland, 0.75 mile north of, in front of W. T. Curtiss's house on west side of road, in line of ditch, in granite boulder nearly embedded in ground; copper bolt stamped "376 ft.".....	375.21

LOCKPORT QUADRANGLE.

AT GASPORT.

Gasport, Erie Canal bridge No. 152, in north end of east abutment; copper bolt stamped "521 ft.".....	520.256
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LOCKPORT, SOUTHEAST TO DYSINGER CORNERS, THENCE NORTH TO ORANGEPORT.

	Feet.
Lockport, in front of Niagara County court-house, east of main door, Niagara street entrance; bronze tablet stamped "616 ft.".....	615.183
Dysinger Corners, William Dysinger's red barn, in southwest corner of foundation; bronze tablet stamped "628 ft.".....	627.697
McNalls Corners, on northwest corner of road crossing, southeast corner of doorstep of large brick house; chiseled square.....	659.01

AT PENDLETON.

Pendleton, Sulphur Springs guard lock bridge No. 168, in north end of east pier; copper bolt stamped "582 ft.".....	581.160
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BENCH MARKS SET FROM OLD RAILROAD LEVELS, CORRECTED (VALUE DOUBTFUL).

Transit (East Amherst post-office), 700 feet west of station, Batavia and Tonawanda branch of New York Central and Hudson River Railroad, south side of Bridge No. 119, in west abutment next to lower step; copper bolt stamped "587".....	588.554
East Clarence, 2,400 feet east of, Batavia and Tonawanda branch of New York Central and Hudson River Railroad bridge No. 114, at south end of east abutment, in coping stone; copper bolt stamped "639".....	638.070

RIDGEWAY QUADRANGLE.

ON CIRCUITS TIED TO CANAL BENCH MARKS.

Jeddo, 153 feet from doorway of Adventist Church, 50 feet from doorway of schoolhouse, in road corners in top of boulder 3.3 feet high; copper bolt stamped "421".....	419.927
Oak Orchard, 6 feet from southwest corner of iron bridge across Oak Orchard Creek, 1,000 feet east of post-office, in abutment; copper bolt stamped "370".....	369.588
Eagle Harbor, Gaines Town, Erie Canal bridge No. 131, in lower step of east wing, towpath side; copper bolt stamped "516" (Barge canal 516.899).....	515.715

MEDINA QUADRANGLE.

ON CIRCUITS TIED TO CANAL BENCH MARKS.

Middleport, Erie Canal bridge No. 145, in north foundation under center of bridge and facing towpath and canal; bronze tablet stamped "519".....	518.458
Medina, Prospect Street Bridge No. 140, lower step, east end, north side of Erie Canal; copper bolt stamped "518".....	517.189

ELEVATIONS DETERMINED FROM NEW YORK STATE SURVEY LEVELS OF 1883, CORRECTED.

East Shelby, at southwest corner of Methodist Episcopal Church, in boulder; copper bolt stamped "668".....	667.547
Shelby Town, 125 feet north of Coons Bridge, east side of road between East and West Shelby, in top of boulder 3 feet high; copper bolt stamped "616".....	615.756
Wheatville, 200 feet north of road crossing, 3 feet east of fence line, under northwest corner of red barn of John Waterstreet, in granite boulder; copper bolt stamped "669".....	668.182
Alabama station, 4 miles northwest of, 0.2 mile north of Tonawanda Creek, north side of gate entrance to feeder, in second step of east abutment; copper bolt stamped "622".....	621.160

BENCH MARKS SET FROM OLD RAILROAD LEVELS, CORRECTED (VALUE DOUBTFUL).

Pembroke, 1,550 feet east of railroad station, Batavia and Tonawanda branch of the New York Central and Hudson River Railroad, on coping stone of east abutment of Bridge No. 104, south side of track; copper bolt stamped "823".....	822.780
East Pembroke, 1 mile north of, 630 feet north of corner, east side of north and south road, on land belonging to E. H. Clark, in boulder 6 feet square deeply embedded in ground; copper bolt stamped "873 ft.".....	872.140

OAK ORCHARD QUADRANGLE.

ON CIRCUITS TIED TO CANAL BENCH MARKS.

Fairhaven, 1,200 feet south of, on east side of road to Albion, in top of stone masonry wall in front of Mrs. Dixon's house; copper bolt stamped "439".....	438.206
East Gaines, 1 mile east by 1 mile south of W. H. Banker's house, on west side of Transit road, 600 feet north of Murray and Gaines Baptist Church, in dooryard 12 feet south of dwelling, in stone 3 feet square and 1.5 feet high; copper bolt stamped "458".....	457.114
Murray, 610 feet north of road crossing on west side of road, 81 feet southwest of stone school-house, in boulder 3 feet wide and 2 feet high; copper bolt stamped "410".....	409.458

ALBION QUADRANGLE.

BENCH MARKS TIED TO CANAL BENCH MARKS.

	Feet.
Albion, Orleans House, corner of Platt and Bank streets, 40.5 feet from Banks street corner, on Platt street side, 7.7 feet from office door; bronze tablet stamped "521".....	519.984
Holley, Webster warehouse, south and west of Erie Canal bridge No. 115, in doorsill of door on canal side; copper bolt stamped "514".....	513.210

ELEVATIONS DETERMINED FROM NEW YORK STATE SURVEY LEVELS, CORRECTED.

Clarendon, 4 miles south of, opposite Andrew Kuhn's house on land belonging to Mrs. Butcher, 0.33 mile north of county line, in granite bowlder; copper bolt stamped "648".....	647.137
Elba, 3.8 miles northeast of, at southwest corner of junction of east and west road and road south to East Elba, in granite bowlder; copper bolt stamped "675".....	674.637
East Oakfield, 1.5 miles east of, 65 feet southeast of schoolhouse, District No. 9, 15 feet from road corner, on west side of north road, in bowlder; copper bolt stamped "709".....	708.143
South Barre, 220 feet east of road crossing, in stone doorsill of schoolhouse, District No. 9; copper bolt stamped "652".....	651.645
Barre Center, 3 miles southwest of, 1.5 miles northeast of West Barre, E. E. Allis's house, on north side of road, in lower of three stone steps of eastern front door; copper bolt stamped "666".....	665.304

BENCH MARK SET FROM OLD RAILROAD LEVELS, CORRECTED (VALUE DOUBTFUL).

South Byron, 1,710 feet west of railroad station, 27 feet north from center of north track of New York Central and Hudson River Railroad, in next to upper step of large culvert, across Black Creek; copper bolt stamped "682".....	681.165
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ERIE COUNTY.

EDEN, GOWANDA, AND HOLLAND QUADRANGLES.

The leveling on Holland and part of Eden was done in 1904 under the direction of Mr. J. H. Jennings, topographer, by Mr. I. W. Petit, levelman, and that on Gowanda and remainder of Eden was done in 1905 under the direction of Mr. Gilbert Young, topographer, by Mr. R. P. Thompson, levelman. Standard bench marks are stamped "ADJ 1903" in addition to the figures of elevation.

EDEN QUADRANGLE.

BLAISDELL, SOUTH ALONG THE PENNSYLVANIA RAILROAD VIA HAMBURG, TO COLLINS STATION.

	Feet.
Hamburg, in stone foundation at northwest corner of Kopp's Hotel, at end of car line; bronze tablet stamped "826 ALBANY 1903 ADJ".....	825.555
Water Valley, Erie Railroad; top of rail.....	790.6
Eden Valley station, 300 feet east of Erie station, in northwest corner of foundation of Albert Dagle's house; bronze tablet stamped "792 ALBANY ADJ 1903".....	792.254
Eden Center, northeast corner of foundation of schoolhouse; bronze tablet stamped "ALBANY 828 ADJ 1903".....	827.573
North Collins, Erie Railroad station, in east face of southeast corner; bronze tablet stamped "847 ADJ 1903".....	847.023
Lawton, in west face of foundation wall of E. H. Lawton & Son's store; bronze tablet stamped "826 ADJ 1903".....	825.640

HAMBURG, ALONG HIGHWAY SOUTHEAST TO BOSTON CENTER.

North Boston, 3.7 miles east of Hamburg, on northwest corner of south abutment of bridge over Idlewood (or Eighteenmile) Creek; bronze tablet stamped "818 ALBANY 1903 ADJ".....	817.517
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BOSTON, SOUTH TO MORTONS CORNERS, THENCE WEST TO LAWTON.

New Oregon, 100 feet northwest of crossroads, in southeast corner of foundation of Peter Kirsch's house; bronze tablet stamped "1075 ADJ 1903".....	1,075.137
Woodwards Hollow, in east face of foundation wall of F. J. Ryther's store; bronze tablet stamped "1305 ADJ 1903".....	1,304.850
Mortons Corners, 500 feet west of, 106 feet from corner of Martha Schabehorn's house, 77 feet from Helen Briggs's house, and 151.42 feet from Emily Sampson's house; iron post (primary-traverse station No. 134) stamped "1389 ADJ 1903".....	1,389.046
Whites Corners, 0.9 mile west of, in dooryard at northwest corner of dwelling house occupied by Mr. Christopher Naegle, on south side of road; primary-traverse iron post stamped "11 5 ADJ 1903".....	1,114.399

GOWANDA QUADRANGLE.

COLLINS STATION, ALONG THE PENNSYLVANIA RAILROAD, TO DAYTON

	Feet.
Collins station, in southeast corner of building owned by F. Mathan, in water table; bronze tablet stamped "875 ADJ 1903".....	875.150

HOLLAND QUADRANGLE.

BOSTON CENTER, SOUTH TO BOSTON.

Boston Center (Patchin), opposite Michael Flickgenar's grocery, on large bowlder; bronze tablet stamped "903 ALBANY 1903 ADJ".....	903.048
Boston, 135 feet north of Iroquois Hotel, in grass plat at intersection of roads; iron post stamped "941 ALBANY".....	940.964

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